A STUDY ON THE ACQUISITION OF ENGLISH DEMONSTRATIVES THIS AND THAT

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CHAPTER 1

INTRODUCTION

Space is null and void. According to Merleau-Ponty (1969), the whole of open space is defined as "être en soi" or "being itself" (translated by the present writer).

Space is absolutely homogeneous; homogeneous at all points, and each dimension is substantially convertible. Therefore, in specifying spacial relationships in terms of direction, polarity and subsumption, human beings employ the relevant criteria on the basis of some axes. For the objective axes, latitude, longitude, sea level and other geographical discriminations such as country, prefecture, city and town are employed. For the subjective axes, human beings -- Ego or Nonego -- are employed. These are the basic axes for ordering spacial relationships.

Demonstratives are the verbal manifestation of spatial relationships specified in terms of the Human Ego. Demonstratives are, according to the Peirce's classification, indexical symbols; "language entities with,... a changing indexical meaning corresponding to the particular circumstances of the utterances" (Parret, 1980: 103). Demonstratives are constant in their symbolic meaning, but indexical

meaning differs according to the context. The great generality underlying the conventional rule in terms of symbol is concerned with human cognition of spatial distinction and definition of axis.

A study of demonstratives is an important and intriguing topic for philosophers, psychologists and linguists. Obviously, it has much to do with genetically human biological, perceptual and cognitive characteristics. There are numerous languages which incorporate demonstratives in their system of grammar. All of them have language specific ways of determining space specification. It is not easy to find out the various principles which underlie this special specification which is reflected in the use of the demonstratives.

This thesis addresses itself to the study of English demonstratives: First, we study the adult system of English demonstratives. Next, we discuss the children's acquisition of English demonstratives according to the adult system.

Before starting, I want to say a few words about terminology. According to Lyons (1977a), the term "demonstrative", which is a Latin-based term, has been specialized in linguistics by the earlier Greek traditional grammarians. The proto-form of "demonstrative" is "δεικεικ-ός" (OED, s.v. deixis, which means "able to show, showing directly", which came

to enable the linguists to employ the term "deixis". The notion of demonstrative, according to Parret, is traditionally used for "the category of words the meaning of which is, as a prerequisite, an associated demonstration (including, in most cases, the accompayning pointing)." (Parret, 1979: 96)

Demonstratives are clssified into some categories in terms of the usage: the most rough classification will be "anaphoric" use and "deictic" use. The anaphoric use of demonstratives, as (1) and (2) show, are used to refer to something already mentioned in the previous context; and the deictic demonstratives, as (3) and (4) show, are used to refer to something to be mentioned in a subsequent context by directly pointing or nodding and, in some cases, to the representation in memory.

(1) The first in time and the first in importance of the influence upon the mind is <u>that</u> of nature.
(Ralph W. Emerson, <u>The American Scholar</u>, 1923: 47

(2) It [passivisation] may be a useful category,.... But the range of phenomena that fall within <u>this</u> category in some sense appear to be rather heterogeneous in character.
(Noam Chomsky, <u>Lecture on Government and Binding</u>, 1982: 121).

(3) <u>This</u> is a pen, and <u>that</u> is a fountain pen.

(4) What is <u>that</u> sound? what is <u>that</u> ordour?

Fillmore (1971) distinguishes gestural, symbolic and anaphoric use of demonstratives In the case of gestural use, the speaker's physical movement or position puts the non-speaker into the position of interpreting the demonstratives by "monitoring some physical aspect of the communication situation" (Fillmore, 1971: 40); in the case of symbolic use, the interpretation of the demonstratives involves merely knowing certain aspects of the speech communication situation, whether this knowledge comes by current perception or not; and in the case of anaphoric use, the correct interpretation of the demonstratives depends on the addressee's knowledge of "what other portion of the same discourse the expression is coreferential with." (Ibid.)

He provides us with the examples of gestural symbolic use of expression shown as follows:

> ...If during my lecture you hear me use a phrase like "this finger", the chances are fairly good that you will look up to see what it is that I want you to see; you will expect the word to be accompanied by a gesture or some demonstration....[= gestural deixis]. On the other hand, if you hear me use the phrase "This campus", you do not need to look up...[=symbolic deixis]....

In this thesis, the prsent writer intends to concentrate on discussing "gestural demonstrative", a term coined by Fillmore (1971).

Here it should be mentioned that "demonstratives" include the demonstrative locatives and demonstrative pronouns (and determiners). In the present thesis, we shall concentrate on this and that, and our interest will not be directed to here and there, and these and those. Henceforth, we simply use tne term "demonstratives" in reference to this and that.

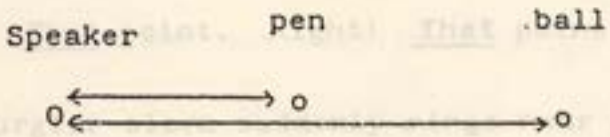
The present thesis consists of two parts. In Chapter 2, most of our argument consists of the close examination of the system of English demonstratives this and that in Present-day English or PE. Chapter 3. addresses itself to the acquisition of English demonstratives.

According to the traditional explanation of the usage of this and that, this has been reported to represent what is near to the speaker, and is opposed to that, which is employed to represent whatever is distant from the speaker. That is, in the previous scholarship, the difference between this and that has been considered to be in the distance from the speaker: This is used when the speaker refers to

things which are 'near' to him/her and <u>that</u> is used when he/she refers to things which are 'far' from him/her. To summarize the traditional definition of demonstratives, two independent but interacting parameters have been found to govern the use of <u>this</u> and <u>that</u>: (a) the spatial relation — proximal/distance and (b) the point of reference.

The examples shown below can be accounted for by the parameters (a) and (b).

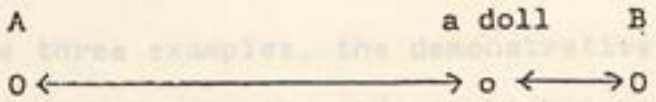
(5) <u>This</u> is a pen. <u>That</u> is a ball.



(6) (A and B are sitting in a canonical position. A wants a doll near B. The doll is far from A.)

A: I want <u>that</u> doll.

B: <u>This</u> one?



In both of the above examples, this is used because the object is in the vicinity of the speaker; that is used when the object is far from the speaker.

But such examples raise problems for the definition of the meaning of demonstratives that we have been using so far. Consider the following examples:

(7) (A is giving shiatsu (Japanese massage) to B's stiff shoulder. A is standing behind B.)

B : That point. Right! That point!

(8) (A burglar alarm suddenly rings near A.)

A : What is that?

(9) (A shows a doll she made to B. A has the doll in the hand. Stretching the arm toward B)

A : Look at that.

In these three examples, the demonstrative that is used in order to refer to the object which is in the vicinity of the speaker, thereby violating the definition of 'distance'.

Examples (5) through (9) can be brought together in one of the two ways: by abondoning the interpretation of English demonstratives this and that in terms of the definition of 'distance' and of 'reference-point' in case (5) through (9), or by extending the definition of demonstratives so that it can cover more 'complex' cases. The former approach seems wrong, since the usage of this and that captured by the ordinary definition of these words is plentiful. In this thesis, therefore, the latter approach will be adopted. In doing so, the identities of the definition of 'distance' and 'reference-point' are problematic. Namely:

(10) What is the nature of the feature that governs the use of that in (5) through (9)?

In order to provide an adequate answer to this question, more examples, which are relevant to this problem, will be examined. Ultimately five guiding principles will be formulated. Three of the principles relate to the Language Internal Principle and the remaining principles are the Vector Principle and the Speaker Principle. The Speaker Principle is one that determines the axis the Language Internal Principle works on.

In line with this recommendation, how the child grows to appreciate the principles that govern the usage of English demonstratives which adults have a good command of will be considered. Especially, in this paper, the acquisition of the Invisible Principle or the IP, which is formulated as one of the principles underlying the use of this and that, will be focussed on. On the basis of the observational and experimental studies, it will be proposed that the IP is acquired in a series of key steps.

Additionally, the deeper analysis of the observational data available and the previous scholarship have led us to hypothesize that there are some order in the children's acquisition of the subprinciples of the LIP and the SP.

Suppose it is assumed that there is an acquisitional order in learning the principles, then it seems there are two possible assumptions in considering the developmental process and the acquisitional order of the principles. One possible assumption is that the principles are accumulatively acquired according to the transition from T_i (= the initial state) to T_n (= the steady state). This hypothesis also seems to suggest the presence of the innate endowment of grammar which is activated by the child's cognitive development, the child's experience and some other factors.

The other possible assumption is that these rules are acquired in no specific ordering. This paper addresses itself to the study of the acquisition of demonstratives from the former standpoint.

However, it is not always possible to get enough information to decide the acquisitional order. In such case, it seems that we should refrain from making a hasty conclusion. In this thesis, we will, therefore, try to present a possible assumption as a steppingstone to the more valid ones which are to be arrived at with the more extensive and, at the same time, closer study from observational and experimental points of view.

The organization of this paper is as follows.

Chapter 2 is concerned with the adult system of the this and that. In 2.1, we will study on the principle of 'distance', reviewing the previous scholarship. We term the principle 'the distance principle' or the DP. From 2.2 on, we will point out that there are some examples which cannot be explained by the DP, which has been considered to be the only one dimension underlying the usage of English demonstratives in the previous studies. In 2.2, the principle of 'territory (on the axis of the speaker)' will be introduced

to analyze the data type (7). We term the principle the 'Possessive Principle' or the PP. In 2.3, we will introduce a principle of 'visibility' in order to analyze the data type (8). We term this principle 'the Invisible Principle' or the IP. In 2.4, we will introduce a principle of 'vector' in order to analyze the data type (9). We term this principle 'the Vector Principle' or the VP. In 2.5, we will briefly show that the the point-of-reference shifting holds for each principle of the 'distance', 'territory', 'visibility' and 'vector'.

Chapter 3 is concerned with the acquisition of English demonstratives this and that. First, in 3.1, we will discuss how linguists and psychologists grasp the developmental process of demonstrative acquisition. Second, in 3.2, we will concentrate on the acquisition of the principle of 'visible' or the Invisible Principle. After providing the observational data available, we will study on the acquisition of the IP via experimental approach.

Finally, Chapter 4 will conclude this paper.

CHAPTER 2

ADULT GRAMMAR OF ENGLISH DEMONSTRATIVES

2.0. Introduction

As Urban says, "our intellect is primarily fitted to deal with space and moves most easily in this medium" and thus, "language itself becomes spatialized, and in so far as reality is represented by language, reality tends to be spatialized" (Urban, 1939: 186), and many languages incorporate designs and devices to deal with relativistic space. Although these devices for organizing the distinctive dimension are language-specific, they seem to have both universal and relative properties. This has an effect on the system of demonstratives. Languages are universally closely tied to the aspects of the biological, perceptual and cognitive systems of human beings. The correlation between language and human endowed capacity is reflected in the universal way of employing names for spatial terms (See Berlin, 1976; Clark and Clark, 1979).

In this chapter, we will discuss the principles that determine the general use and which satisfy the empirical evidence of the English demonstratives this and that.

The number of ways in which demonstratives are used is very large and complex. But if we assume the Language Internal Principle or the LIP, which contains the Distance Principle or the DP, the Possessive Principle or the PP and the Invisible Principle or the IP, the Vector Principle or the VP and the Speaker Principle or the SP, this complexity can be naturally and significantly ordered.

Here it should be mentioned that the factors which determine the use of the demonstratives are cognitive and psychologically based and are also realized linguistically.[1]

This chapter consists of five parts.

In 2.1 we will see some empirical evidence observing a principle of 'distance' or the Distance Principle. In 2.2 we will see some counterexamples of the DP. In order to explain the examples, we will introduce a principle of 'territory' or the Possessive Principle. 2.3 will discuss some

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[1] From observation, it is hypothesised that the factors which determine the usage of this and that are cognitive and psychologically based. Therefore, "language" in the terminology of the LIP is used in a broader sense.

examples which cannot be accounted for by the DP and the PP. Such examples will be explained by a principle of 'visibility' or the Invisible Principle. In 2.4 some examples which obviously yield a contradiction in the specification on the basis of the DP, the PP and the IP will be shown. In order to explain such examples, we can introduce a principle of 'vector' or the Vector Principle. In 2.5 we will briefly touch the principle of 'point-of-reference' or the Speaker Principle. 2.6 will summarize the discussion.

Before starting our discussion, it should be mentioned that the features [±proximal], [±possessive] and [±visible] are employed in this thesis: [±proximal] specifies the spatial relationship; [±possessive] specifies the territorial relationship; [±visible] specifies the visibility condition. Every feature is specified on the axis of the speaker. Furthermore, [+proximal] is categorized into two features: [+proximal$_1$] and [+proximal$_2$]. The former represents the meaning "the object in focus is in the physical space of the speaker (e.g., the speaker is touching the object in focus)" and the latter represents the meaning "the object in focus is in the individual space of the speaker (e.g., the speaker regards the object as being

in the personal space of himself/herself)". [-Proximal] represents the meaning "the object in focus is outside the physical space (which also means that the object in focus is outside the individual space)".

2.1. Distance Principle

Now in this section we will discuss the meaning of this and that in terms of the feature of [±proximal] on the axis of the speaker

First, let us review the definitions of this and that which have been given to them by grammarians.

Many linguists and grammarians have stated that the general meaning of these two words can be distinguished from the point of view of the spatial relation to that point of reference. That is, the general meaning of demonstratives has been regarded as being defined along the dimension of distance from the speaker's Ego.

R. Lakoff (1974) considers that an object is identified by use of this as being near at hand and that is used of an object far from the speaker. It should be noticed that Lakoff considers that this is used for the object which is near to the speaker rather than the addressee if there is a distinction. Zandvoort states that "this and these refer to what is near in space, time or conception, that and those to what is further off" (Zandvoort, 1957: 147). Recent grammarians such as Thomson and Martinet (1983), Quirk and Greenbaum (1973), Quirk, Greenbaum, Leech and

Suartick (1972) also consider that the meaning of this and that can be stated in terms of the difference of the distance.

Lyons (1975) analyzes the English demonstratives on the basis of semantic criteria, and proposes a feature analysis such as the following. That$_1$ represents the non-contrastive that and that$_2$ represents the cotrastive that.

this	that$_1$	that$_2$
+deictic	+deictic	+deictic
+entity	+entity	+entity
-person	-person	-person
+proximate	-proximate	-proximate
	+distant	-distant

Thus, many grammarians have so far been assuming that the DP yields considerable insight into the definition of English demonstratives this and that. To mention a few examples, consider (1) through (5):

(1) (Pointing at the tree at five meters apart)

A : Look at that tree.
B : Is that a Japanese pine tree?
A : No, it isn't.

(2) (Pulling a wry face)

Linda : Can you do like this?

(3) (Having three skirts in the hands, Linda wonders which skirt she should wear for the Christmas Party)

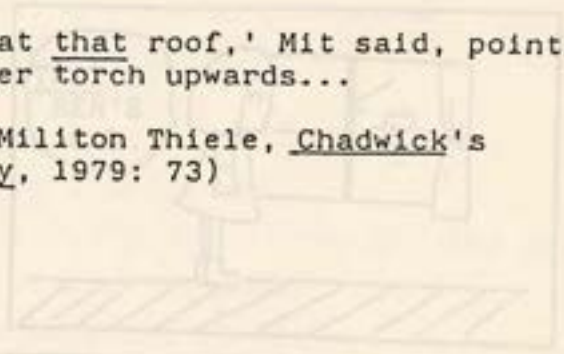
Linda : Which is better, this one, or ... this one? This one is so plain. This skirt is better. Sophisticated isn't it? O.K. I'll wear this one.

(4) (Fireworks are displayed. Looking up the sky)

Linda : Up goes the fireworks! That is like a chrysanthemum.

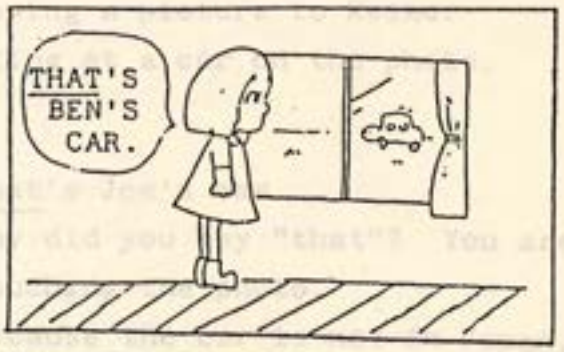
(5) ...'Just look at that roof,' Mit said, pointing the flame of her torch upwards...

(Colin Militon Thiele, Chadwick's Chimney, 1979: 73)



We will see that the DP also functions in such situations as the following: In (6), the speaker is looking outside the window. It should be noted that if there is some obstacle such as a window in (6), which makes the barriar between the speaker and the object, the domain of the individual space is minimized. In (7), the speaker is looking at the moon through a telescope. Though the reflection in the lens is in the vicinity of the speaker, she employs <u>that</u>. The reason of this fact will be explained as follows: the object in focus is in non-vicinity of the speaker, and the speaker conceives the fact as a presuppostion.

PICTURE 1



PICTURE 2

(6) (Looking outside the window)

A : That's Ben's car. Where is he going?

(See Picture 1)

(7) (Looking at the moon through a telescope)

A : That's beautiful... (See Picture 2)

It should be noted that the DP is not only conditioned by the spatial relationships with speaker's Ego.

The following example shows that the object in a picture is identified by use of that. This example shows that if the object in focus is psychologically 'far' from the speaker, that is employed whether or not the object is physically distant from the speaker.

(8) (Allison and Keiko are sitting side by side. Allison is showing a picture to Keiko. Allison, pointing at a car on the photo, utters:)

Allison : That's Joe's car.
Keiko : Why did you say "that"? You are touching the photo.
Allison : Because the car is not in Japan, but in America, far away from here.
Keiko : Is this car your car?
Allison : No, it is Joe's car.

Thus, the following definition in terms of the DP will be formulated on the basis of the previous scholarship and the examination of the empirical evidence in PE.

(9) Distance Principle (=DP)

The spatial relationship —distance or proximity— governs the use of English demonstratives this and that. If the object in focus is in the physical space of the speaker or in the individual space of the speaker, this is employed. If the object in focus is outside the individual space, that is employed.

Here, we stipulate that the physical space is represented by the feature [+proximal$_1$]; the individual space is represented by the feature [+proximal$_2$]. Therefore, the DP will be shown as follows:

(10) The spacial relationship —distance or proximity— governs the use of English demonstratives this and that. If the object in focus is represented by the features [+deictic, +proximal$_1$] this is employed. If the object in focus is represented by the features [+deictic, +proximal$_2$] this is employed. If the object in focus is represented by the features [+deictic, -proximal], then, that is employed. The parameters that govern the DP are the features [+proximal$_1$], [+proximal$_2$] and [-proximal]. These parameters are effected by the psychological element.

The problems concerning the personal domain of the demonstratives this and that seem to be related to the human conceptual division of space. This should be investigated in the study of ethology.

So far, the DP has been found to give adequate explanations to some examples. That is, as far as we see the data (1) through (8), the DP apparently seems to be observed.

Although there are many cases in which the DP can explain the usage of demonstratives this and that, there seem to be some cases in which the discrimination of the usage of this and that cannot be explained only by the DP. That is, even if the object in focus is within the individual space, there are cases in which that is employed instead of this, violating the DP. Consider the examples shown below:

(11) (Allison and Linda are standing side by side about 0.3 meter apart. Allison is picking out a jacket to wear. Allison is 22 years old. She is an exchange student from America.)

Allison: I'll wear this jacket.
Linda : That looks nice for Saturday night. Yea..., that's nice.

(12) ...For a second it was hard for her to see clearly in the gloom but she seemed to sense him there,
'Is that you, Kevin?'
'Yes, Mum.'
(underlined by the present writer)
(Colin Milton, Chadwick's Chimney: 30)

(13) (Speaker is pretending to hit the addressee.)
A : Take that.

These are the basic examples to be dealt with in the study of the usage of this and that in the proceeding section, though there might be other cases to be considered as well.

The closer analysis indicates that the objects identified by the use of that are different in their properties. Analyzing the data closely, they seem to fall into three main categories, which resonate the features govering the use of demonstratives: "possessivity", "invisibility" and "vector". (11) concerns the feature of possessivity: (12), the parameter of invisibility, and (13), the parameter of vector (movement).

In the proceeding sections, we will examine the empirical evidence available. On the basis of the examples, we will formulate some principles which seem to govern the use of demonstratives this and that.

2.2. Possessive Principle

At ASIJ Nursery-Kindergarten, on October 12, 1984, a little girl who was five years and ten months old noticed that the present writer, standing beside her about 0.5 meter away, had a stuffed animal in the hands, and while she stared at it, she said, "What's that?" The present writer was there with a tape recorder, since at the time the production of hers was being collected.

It is often said that no well-settled ideas are unseated by a single instance. The example "What's that?" for the object in the vicinity of the five-year-old who gave the remark on that day became a trigger for the present study.

(14) (Mikhal (5;10) notices that Keiko, standing beside her about 0.5 meter away, has a stuffed animal in her hands.)

Mikhal : What's <u>that</u>?
Keiko : What do you think this is?
Mikhal : Is <u>that</u> a bear?
Keiko : Yes, it is.

As far as the present writer knows, Tanz (1980) and Hewson (1971) whose theory will be introduced in the proceeding section are the only scholars who point out that there are linguistic phenomena which cannot be explained by the DP and the SP. That is, Tanz states that it is not absolutely true that the demonstrative there must mean 'not in the vicinity of the speaker'. She gives the following example.

(15) A : (Rubbing B's stiff shoulder)
Where does it hurt?
B : Right there.

Tanz states that "there can probably be used to point to any part of one's own body, except perhaps to a location right behind the eyes, the site of the homunculus who directs one's activities. The example above [=(15)] is offered not merely as a quibble but to suggest the vagaries that children are faced with as they learn how the system works." (Tanz, 1980: 71)

Though Tanz mentions the necessitiy of another rules that govern the use of English demonstrative there, the datum given by Tanz shows the case of one demonstrative there, and the datum itself does not wear its explanation on its sleeve. That is, it is unclear

what to make of the evidence, and the datum seems to be standing unsolved.

In this section, analyzing the empirical evidence available, we will discuss that such data as (11), (14), and (15) seem to fall into one category, which resonate the feature [±possessive] governing the use of demonstratives. It will be defined in this thesis that the concept of 'territory', which is specified by the psychological variable, underlies the use of the English demonstratives this and that. The feature [+possessive] represents the meaning 'the object in focus is in the territory of the speaker at the coding time or CT' and the feature [-possessive] represents the meaning 'the object in focus is outside the territory of the speaker at the CT'. The concept of 'territory' is defined as follows. That is, if the object in focus is in the dominance of the other person (addressee, in many cases), then the object is regarded as being outside the territory of the speaker; if the object in focus is in the dominance of the speaker, then the object is regarded as being in the territory of the speaker himself/herself. Therefore, the 'territory' is governed by the psychological variable in terms of the 'dominance' at the CT.

Now, let us see some cases in which the DP is violated.

(16) (Linda brings a postcard to Allison's room. Linda is passing the postcard to Allison.)

Linda : Smell this. I got it today from Ike. It's good.

(17) (Allison passes Linda an envelope. Linda takes the envelope. Having the envelope in the hand, Linda smells it.)

Allison : My sister sent the Christmas card today.
Linda : (Smelling the card) What's that? That smells good.
Allison : It's Chanel No. 19.

Look at the utterances of Linda. The topic of the two examples is 'the odour of the letter'. In both cases, she has the object in focus in her hand. However, in (16), she employs this; in (17), that. How could these contradictory use of demonstratives be explained?

One possible solution is to ascribe the contradiction to the topic of this conversation — 'smelling' which is an invisible object. It is true that the use of demonstrative in the production "What's that?" in (17) is governed by the nature of 'invisibility' of the object in focus. (See Section 2.3.) However, the other that's in both cases deal with the common topic, 'invisible object'. Therefore, there is no topical difference between (16) and (17). Hence, this solution is rejected.

The difference between the production of (16) and that of (17) seems to be in whether the object in focus is in the psychological territory of the speaker or not. (The object in focus is 'letter'. The distance between the object and the speaker is the same — the object is in the physical space of the speaker. The topic is 'the smelling of the letter' in both cases.)

Therefore, it seems that a principle of 'territory' enables the different output of this and that to be summed up under a mechanical system. That is, it might be hypothesized that the different usage of demonstratives comes from the feature 'poesessivity' on the axis of the speaker. If the object in focus is in the 'territory' of the speaker, then this might be employed. On the other hand, if the object in focus is outside the 'territory' of the speaker, then that might be employed. If this is so, the examples (16) and (17) will be explained in a natural and simple way.

Let us see some other examples. In spontaneous speech produced by native speakers of English, we can find other empirical evidence of the principle of 'territory'.

(18) (Allison is studying kanji, Japanese characters. Linda is standing side by side about 0.3 meter apart from Allison. Linda notices that Allison writes kanji letters on a strange sheet of paper.)

Linda : Did you bring that paper from America?
Allison: Which Paper?
Linda : This paper.

In the example shown above, when Linda asked "Did you bring that paper from America?", she was not touching nor pointing to the paper in focus. On the other hand, when Linda said, "This paper", she was touching the paper. However, in both cases, she was standing about 0.3 meter away from Allison. Therefore, in the former case, the DP is not satisfied; in the latter, the DP is observed. How can this contradictory output of this and that be explained?

In this case, it seems that the principle of 'territory' enables the apparent contradictory output of this and that to be summed up under a mechanical system. If the speaker touches the object, the DP is observed even if the object is not hers. Hence, this is employed. However, if the object in focus is in the individual space of the speaker, and if it is not speaker's, the DP is not observed, but instead, the principle of 'territory' comes to be dominant. Hence, that is employed.

Thus, closely examining the English sponteneous speech, we find the usage of that, although violating the DP, compatible for the context. We have hypothesized that such examples can be given adequate explanation if a principle of 'territory' is taken into consideration. Here, we term the principle of 'territory' underlying the usage of English demonstratives this and that as the 'Possessive Principle' or the PP.

In spontaneous speech produced by native speakers of English, we can find some empirical evidence of the PP. Consider the following example:

(19) (Allison and Linda are standing about 0.5 meter apart at the canonical position.)

Allison: (Without touching but just pointing at the shirt she wears) Is this your shirt?

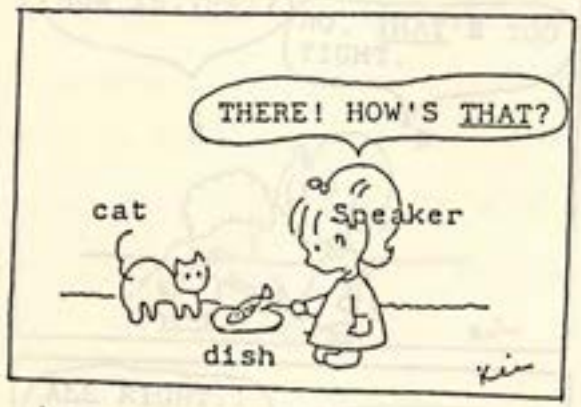
Linda : No, that's your shirt.

In the example above, Allison is standing in the vicinity of Linda. However, Linda employs that for the shirt Allison wears, violating the DP. In respect of the PP, however, the use of that is compatible with it. That is, even if the object in focus is in the individual space, if it is in another person's (addressee's) territory, both

physically and psychologically, the part of individual space comes to be regarded to belong to the that territory. Hence, that is employed in (19).

Suppose the PP underlies the use of demonstratives, the example shown below will be adequately explained. This example violates the DP.

PICTURE 3



In the example shown above, the speaker put a dish in front of a cat. The dish is in the vicinity of the speaker. But, in this case, that is employed.

The reason why that is employed by the speaker may be because the dish is regarded to belong to the cat's territory by the speaker. In other word, although the dish is in the individual space of the speaker, that is used, violating the DP, because the dish is

regarded to belong to the addressee's territory. Hence, in virtue of the PP, that is used.

We can find another example of the PP. Consider the following example.

PICTURE 4

PICTURE 5

In Picture 4 - 5, the speaker B employs <u>that</u> for the object in the physical space of her own, violating the DP. The reason of this might be because the Speaker A ties the string of the shoes of B, touching the B's foot. Therefore, the speaker B regards psychologically that the physical space of her own is invaded by the physical space of B. That is, the part of the physical space of the speaker is invaded by that of another person's (addressee's) physical space. Therefore, the part in focus is regarded as being outside the speaker's own territory. Hence, in virtue of the PP, <u>that</u> is employed.

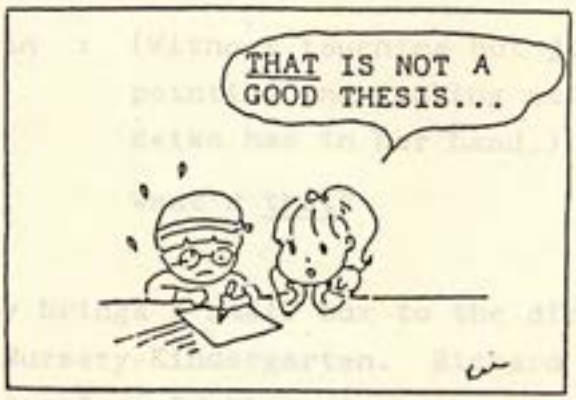
It should be noted that the speaker A also employs <u>that</u> for the object which is incorporated in the physical space of the speaker. This fact can also be explaind in virtue of the PP. Since the object is in B's possession the speaker A psychologically regards it as being outside the A's territory. Hence, <u>that</u> is employed, satisfying the PP while violating the DP.

The example shown below will be analyzed in line with the PP, too.

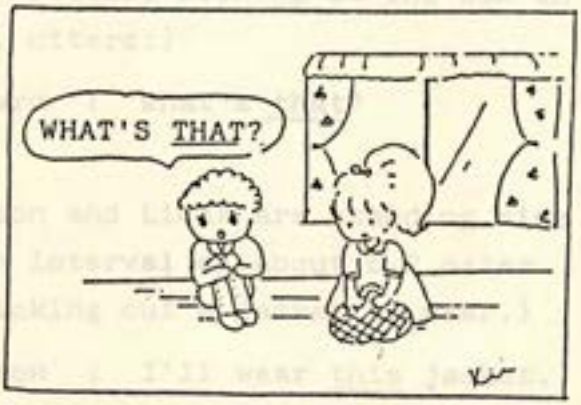
PICTURE 6

Let us see some more examples. Such empirical evidence will be seen to also satisfy the PP.

PICTURE 7



PICTURE 8



PICTURE 9

(20) (Allison and Keiko are standing side by side. Keiko shows Allison a Japanese box made of Japanese paper. Allison and Keiko are about 0.3 meter apart.)

Allison : (Without touching but just pointing and looking at the box Keiko has in her hand.)

What's <u>that</u>?

(21) (A boy brings a small box to the directer at ASIJ Nursery-Kindergarten. Richard Snell, the directer, looking at the box in the boy's hand, utters:)

Richard : What's <u>that</u>?

(22) Allison and Linda are standing side by side at an interval of about 0.2 meter. Allison is picking out a jacket to wear.)

Allison : I'll wear <u>this</u> jacket.

Linda : <u>That</u> looks nice for Saturday night.....Yea, <u>that</u>'s nice.

On the basis of the empirical evidence given so far, we introduce a parameter which concerns the human territorial conception underlying the use of the demonstratives. The examples shown above show that English demonstrative that can refer to the object which is in the vicinity of the speaker, if the object is psychologically (and physically) beyond the territory of the speaker. In other words, if the object is not in the speaker's posession, that is employed, whether or not the object is in the vicinity of the speaker.

On the other hand, if the object is far from the speaker, this cannot be employed, even if it is psychologically in the territory of the speaker. For example:

(23) (Pointing to the speaker's car. The car is far from the speaker.)

A : #This is my car.[1]

Here it should also be mentioned that the PP is hardly acceptable for the parameter of super-proximal, or [proximal$_1$]; that is, when the speaker is physically making a raid on the territory of the addressee, e.g., by touching, this will be employed instead of that even if the object is in the territory of the addressee.

---

[1]We introduce the cross-hatch (#) as an indication that the so marked sentence is incompatible with the indicated context.

In summary, it can be argued on the basis of the empirical evidence that the PP is based on the speaker's conception of 'territory'. If the object in focus is in another person's (addressee's, in many cases) domain. irrespective of the DP, the object's morphological realization is that. The relationshipe between the DP and the PP will be shown as follows.

TABLE 1

Distance Principle / Possessive Principle	[+Proximal$_1$]	[-Proximal$_2$]	[-Proximal]
[+Possessive]	this	this	that
[-Possessive]	this/that	that	that

Consideration of the PP suggests a necessity to introduce the concept of 'territory' of the speaker into the grammar of demonstratives. This can be represented by the features [+possessive]. It seems to the present writer that this principle — Possessive Principle — can explain in a natural way the counterexamples of the DP shown in this section.

To conclude, the definition of the PP will be formulated as follows:

(24) Possessive Principle (=PP)

The human concept of 'territory' governs the use of English demonstratives this and that. PP is valid only for the object which is in the physical space or in the individual space. If the object in focus is in the speaker's territory and is in the individual space, this is employed. If the object in focus is in the speaker's territory and is outside the individual space, that is employed. If the object in focus is not in the speaker's territory and is in the personal space, this or that is employed. If the object in focus is not in the speaker's territory and is outside the physical space, that is employed.

Specifying the definition shown above in terms of the features, we will get the folowing:

(25) Possessive Principle (=PP)

The human concept of 'territory' governs the use of English demonstratives this and that. The PP is valid only for the feature [+proximal$_1$] and [+proximal$_2$]. If the object in focus is represented by the features [+deictic, +proximal$_1$, +possessive]/ [+deictic, +proximal$_2$, +possessive], this is employed. If the object in focus is represented by the features [+deictic, -proximal, +possessive]/ [+deictic, +proximal$_2$, -possessive]/ [+deictic, -proximal, -possessive], that is employed. If the object in focus is represented by the features [+deictic, -proximal$_1$, -possessive], this or that is employed.

2.3 Invisible Principle

In this section data type (8) in Chapter 1 will be analyzed.

According to Cassirer (1953) cited by Tanz (1980), Somali possesses three forms of the article, differing from each other in the final vowels: _-a_, _-o_ and _-i_. These forms are, according to Cassirer, determined by the parameter of [±proximal] and [±visible] to the speaker.

> The article ending in _-a_ is used in designating a thing or person in immediate proximity to the speaker and visible to him. The article ending in _-o_ indicates a person or thing somewhat removed from the speaker, but still visible to him. The article ending in _-i_ is used in referring to someone or something not visible to the speaker.
>
> (Tanz, 1980: 70)

In the system of English demonstratives _this_ and _that_, the two dimensions, proximity-distance and visibility-invisibility, are found to correlate loosely by Fillmore (1982) and Tanz (1980). They consider that _that_ includes both parameters of [-proximal] and [-visible] on the basis of the fact that "things that are nearby are more likely to be visible than distant object." (Fillmore, 1980:53) Fillmore (1982) assumes that remoteness and reduced visibility correlate with each other, and suggests the possibility of the existence of the space-deictic semantic

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feature of [-visible] in the demonstrative that.

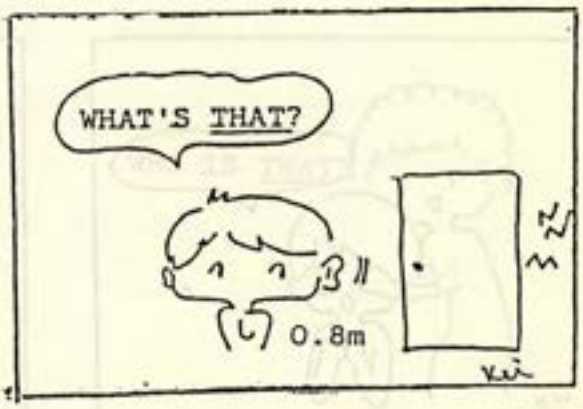
However, is it true that only remoteness-and-invisibility-correlation underlies the use of that?

Judging from what we have seen in the preceding two sections, it seems fair to assume that the DP and the PP give some explanations to various usages of English demonstratives. However, there seem to be some cases in which the discrimination of the usage of this and that cannnot be explained only by the DP and the PP. Therefore, it remains to study the data of natural speech of English more carefully, and to formulate new principles underlying the usage of the English demonstratives this and that.

First, let us see some counterexamples of the DP and the PP.

PICTURE 10

PICTURE 11



(26) (Picking up the ears to the loud voice comes from outside the door. The speaker is at an interval of 0.8 meter from the door. The sound is noisy.)

A : What's that? (See PICTURE 10)

(27) (Something rings in the vicinity of the speaker)

A : What is that? Is that a burglar alarm? (See PICTURE 11)

(28) (Someone blindfolds the speaker from the back)

A : Who is that? (See PICTURE 13)

(29) (Linda smells a flower. The flower is about 0.1 meter away from Linda.)

Linda : That smells nice.

(30) (Allison smells something burning in the kitchen. She is in the kitchen. She is about 0.6 meter apart from the burning object.)

Allison : What's that? (See PICTURE 12)

PICTURE 12

PICTURE 13

Analyzing these data shown in (26) through (30), it is valid to state that all the usages of that in those data correlate with the feature [±visible]: in (26) and (27), that refers to the sound heard, (28) (and (12)), to the object which is out of the speaker's sight and (29) and (30), to the odour. The common characters among voice, the unseen object and the odour will be summed up as the parameter of "invisibility". Furthermore, it should be noted that that which incorporates the feature [-visible] is not basically affected by the DP. That is, whether or not the object in focus is in the vicinity of the speaker's Ego, that is employed, unless the speaker can touch or feel the object which is invisible to him/her.

Consequently, on the basis of the empirical evidence available, we introduce a parameter which concerns the human vision underlying the use of demonstratives. The examples shown above show that English demonstrative that can refer to the object which is in the vicinity of the speaker, if the object is invisible to the speaker. In other words, if the object is not visible to the speaker, that is employed, whether or not the object is in the vicinity of the speaker.

As has already been discussed, it is necessary to formulate a principle of visibility. We term the principle of visibility the 'Invisible Principle' in this thesis.

The central notion of the Invisible Principle or the IP is that <u>that</u> is generalized in terms of the parameter [+visible]: <u>that</u> is employed for the both objects with [+proximal$_2$] and [-proximal], if the object is invisible. The relationship between the DP and the IP will be shown in the following table:

TABLE 2

Distance Principle / Invisible Principle	[+Proximal$_1$]	[+Proximal$_2$]	[-Proximal]
[+visible]	this	this	that
[-visible]	(this)/that	that	that

According to this table, <u>that</u> can appear in two conditions: (a) when the object in focus is [-proximal, +visible] and (b) when it is [+proximal, -visible]. When the object bears the feature of [+visible], the DP works as a dominant principle in determining the use of demonstratives <u>this</u> and <u>that.</u> However, when the object bears a feature

of [-visible], the IP is dominant, regardless of the difference of the distance from the speaker. Here it should be mentioned that when the object in focus is in the physical space of the speaker, [-visible] sometimes does not concern the determination of the usage of this and that. In such case, the DP is dominant. Hence, this is employed.

Let us consider the example below:

(31) ...A sound was coming from the fence post, faint but clear, a sound she [Mit] heard before....'Dad,' she called, 'Mum— listen to this.'
Her mother had just finished climbing through the fence and was not really listening. 'What's that,'dear?'
'Listen to this, listen to this.'

(Colin Milton, Chadwick's Chimney, 149-50)

In this example, the object which makes sound is in the physical space of Mit, and it is identified by the use of this. On the other hand, Mother employs that for the object which makes sound. It is hard to know the exact distance between the object and Mother, But it is clear, at least, that the object in focus is not in her physical space. This example supports the hypothesis that the DP is dominant when the features of the object in focus are represented by [+proximal$_1$, ±possessive (the value of [possessivity] is neutral), -visible].

It should also be mentioned that the feature [±visible] correlates with the PP. The relationship between the PP and the IP will be shown in the following table. It seems that the parameter that specifies the output is the spatial relationship —distance. That is, as is shown in the table below, the object which incorporates the features [±visible] and [±possessive] is identified by the use of either this or that: this is employed if the object in focus is in the physical space of the speaker; that is employed if the object in focus is not in the physical space of the speaker.

TABLE 3

Invisible Principle / Possessive Principle	[+Visible]	[-Visible]
[+Possessive]	this/that	this/that
[-Possessive]	that	that

Summing up, we have discussed in this section that closer examination of the usage of this and that in the act of speaking shows that the feature [±visible] is one of the parameters underlying the usage of English demonstratives. On the basis of the empirical evidence available, we introduced a principle of visibility, which was termed the 'Invisible Principle' or the IP. The definition of the IP will be formulated as follows:

(32) Invisible Principle

The human vision governs the use of English demonstratives this and that. If the object in focus is in the physical space and is visible, either this (or that) is employed. If the object in focus is outside the physical space, that is employed.

Specifying the definition shown above in terms of the features, we will get the following:

(33) Invisible Principle (=IP)

The human vision governs the use of demonstratives this and that. If the object in focus is represented by the features (+deictic, +proximal$_1$ +visible), this is employed. If the object in focus is represented by the features (+deictic, +proximal$_2$, +visible) , this is employed. If

the object in focus is represented by the features [+deictic, -proximal, +visible] / [+deictic, +proximal$_2$, -visible]/ [+deictic, -proximal, -visible], that is employed. If the object in focus is represented by the feature [+deictic, +proximal$_1$, -visible]; this (or that) is employed.

In the history of English yon and yonder, it is found that there was variation in respect to distance versus visibility.

Furthermore, in PE, Scots differs from other nonstandard varieties and standard English in using they as a marker of distant plural reference and thon, which derives from that + yon as a marker of more distant reference (Romain, 1984). Thus, according to Romain, Scots has a three-way distinction in its demonstrative system unlike most varieties of English.

TABLE 4

	Standard English		Scottish English	
	Sg.	Pl.	Sg.	Pl.
'near' reference	this	these	this	they
'distant' reference	that	those	that	they
'more distant' reference	—	—	thon	thon

(Romaine, 1984: 121)

These facts might also support the assumption that English demonstrative system can be well described if we incorporate the parameteric feature of [±visible] into the grammar of demonstratives, which governs the usage of them.

2.4 Vector Principle

In this section, we will discuss the case of the example (9) given in Chapter 1.

In the preceding sections, we have seen that some usages of demosntratives this and that can be adequately accounted for by the principles of 'distance', 'territory' and 'visibility'. These principles were termed the 'Distance Pirnicple', the 'Possessive Principle' and the 'Invisible Prinicple', respectively.

Although there are some cases in which the DP, the PP and the IP can explain the usage of demonstratives this and that, there seem to be some cases in which the discrimination of the usage of this and that cannot be accounted for by these principles. That is, even if the object in focus is in the physical space, is in the territory of the speaker and is visible, there are cases in which that is employed, violating the DP, the PP and the IP.

In this section, in order to account for the examples which do not satisfy the DP, the PP and the IP, we will present a new principle. This principle will be termed the 'Vector Pirnicple' in this thesis.

First, consider the example shown as follows:

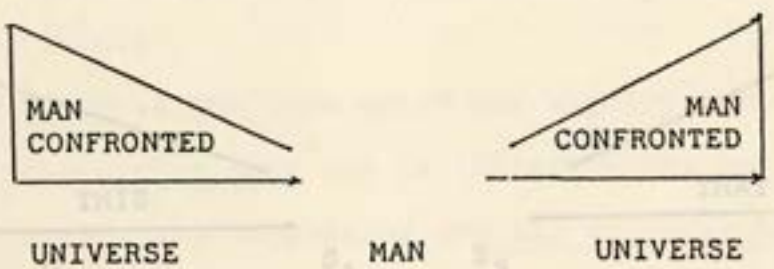
PICTURE 14

In the example shown above (Picture 14), the speaker takes the object in focus in her physical space. The object (a skirt) is in her 'territory', because it is hers, is in her room, and there is no addressee participating in the speech act at CT. The object is visible. Therefore, this is the case in which the demonstrative this should be employed whichever principle — the DP, the PP or the IP — is applied. However, the output produced by the English native speaker is that. Hence,

this is a case in which the DP, the PP and the IP are not observed. Then how can this use of <u>that</u> be explained in a natural way?

Hewson (1972) studies on the usage of English demonstratives <u>this</u> and <u>that</u>, and he considers that <u>this</u> and <u>that</u> could be said to belong to a system of two movements, that is, a binary system that reflects the fundamental binary relationship of man and the universe.

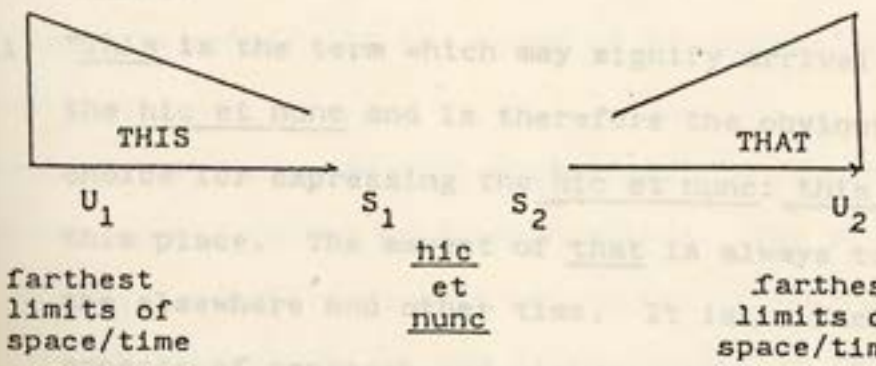
FIGURE 1



(Hewson, 1972: 82)

Hewson (Ibid.) closely examines the use of this and that, and he finds that this and that can be used to refer to anything from the farthest dimensions of the universe down to the hic et nunc (the here and now) of the individual consciousness. Hewson forms the binary system of English demonstratives: "this is the sign of an introductory movement of approach to the hic et nunc; that is the sign of an anaphoric withdrawal from the hic et nunc" (Ibid.)

FIGURE 2



The following is the summary of Hewson's reseach.

(i) The introductory of this is borne out in the telling of anecdotes: "There was this Scotsman...."

(ii) "The movement of approach suggests involvement; that of withdrowal suggests aloofness to the entity referred to. These emotional evertones play a great part in those usages where proximity and distance have no part in those usages where proximity and distance have no part in the expression.... No matter how near or how distant, either this or that will be used because of the aspect that it gives to the noun and the emotional overtones that accompany each aspect." (Ibid.)

(iii) "This is the term which may signify arrival at the hic et nunc and is therefore the obvious choice for expressing the hic et nunc: this week, this place. The aspect of that is always towards the elsewhere and other time. It is in fact the aspects of approach and withdrawal which decide usage, rather than whether a thing is near or distant. The aspect of approach will yield impressison of proximity; the aspect of with-

drawal will yield one of distance in just the same way as these aspects suggest involvement and detachment.(Ibid.)

(iv) "Regardless of distance, a man may be described as this man or that man. As he approaches, however, one can only sensibly call him this man; as he leaves, that man." (Ibid.) The school boy 'jokes' about Stiring Moss (the famous racing driver): "Ladies and gentlemen, this is Stiring Moss, that was." (Ibid.)

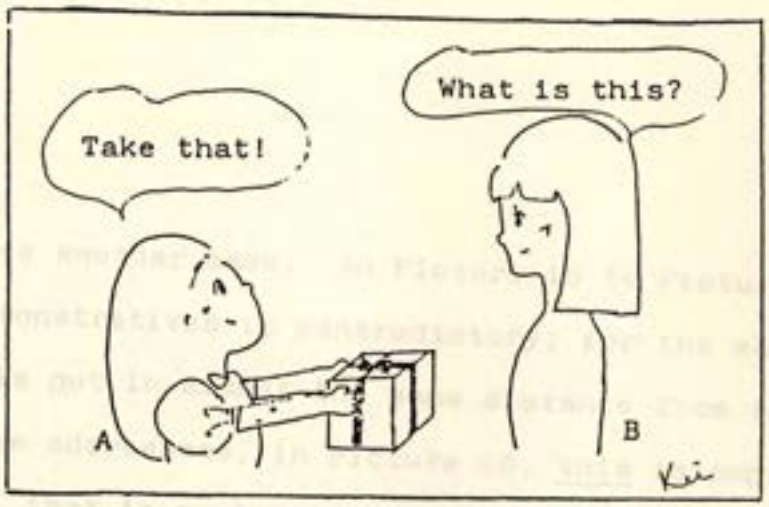
(v) "Only a principle of movement will enable all the different values of this and that to be summed up under one simple mechanical system at the level of tongue." (Ibid.)

As Hewson (1972) states, a principle of movement seems to be needed in specifying the usage of the demonstratives this and that.

Here, we will propose that vector plays an important role in the specification of demonstratives. The vector seems to play a significant role in the use of this and that. In other words, it is the direction of the vector that decides the difference between this and that for the object which is in the intersection between Speaker's territory and the Addressee's territory.

Let us see some more examples:

PICTURE 15



In the example shown above, the object is placed between the two persons. The object is moving from the axis of A to that of B. The speaker A touches the object and the speaker B does not touch it. In order to satisfy the DP, the demonstrative term employed by A should be this and the demonstrative term employed by B should be that. However, the real usage shows that this is not the case. That is, we have here a counter-example of the DP.

However, if the concept of vector is taken into consideration, such an example will be given an adequate explanation. As to the speaker A, the object is leaving away from her. Hence, the vector originates from the speaker A. Therefore, the object which is in the intersection between A's physical space and B's individual space is identified by the use of that. As for the speaker B, the object draws near to her. Hence, the vector originates from the speaker B. Therefore, the object which is in the intersection between B's individual space and A's physical space is indentified by the use of this.

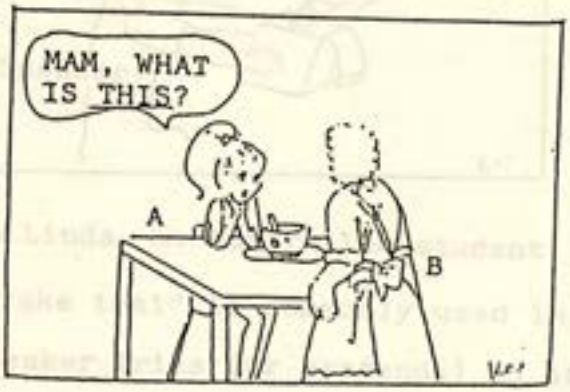
Let us see another case. In Picture 16 to Picture 18, the use of demonstratives is contradictory; for the same object which is put in almost the same distance from the speaker and the addresseee, in Picture 16, this is employed; in Picture 18, that is employed. How could this contradictory usage of demonstratives can be explained?

In order to provide a consistent explanation to those data, which are counterexamples of the DP, the conception of vector will be employed. We term the principle of vector the 'Vector Principle' in this thesis. The vector field incorporates both the speaker and the addressee and the origin of the vector may shift its point — the axis of the speaker and the axis of the addressee.

The Vector Principle or the VP can account for the examples shown in Pictures 16 - 18. In Pictures 16 —17, the object is drawing near to the speaker A. Hence, the object is in the intersection between B's physical space and A's individual space, and the vector originates from B to A. Hence, in the speech of A, the object in focus is identified by the use of this, instead of that, violating the DP. In Picture 18, the object is psychologically leaving away from the speaker A. Hence, that is employed.

PICTURE 16

PICTURE 17

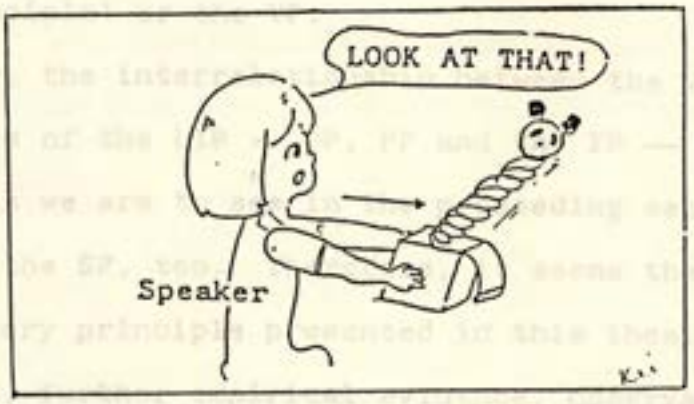


PICTURE 18

Let us see some more cases in which the DP, the PP and the IP are not observed.

When the speaker opens a jack-in-the-box and shows it to the addressee, <u>that</u> is employed:

PICTURE 19



According to Linda, an Australian student, the imperative sentence "Take that" is commonly used in the situation when the speaker tries (or pretends) to strike at the addressee:

PICTURE 20

As has been discussed, examining closely the empirical eveidence available, there are examples which cannot be explained by the DP, the PP and the IP. Such examples were shown to be explained in natural way if we propose the 'Vector Principle' or the VP.

However, the interrelationship between the VP and the subprinciples of the LIP — DP, PP and the IP — remains unsolved. As we are to see in the proceeding section, the VP subsumes the SP, too. Therefore, it seems that the VP holds for every principle presented in this thesis. As to this problem, further empirical evidence, observational and experimental, is required. This is the area for the future study.

To conclude, the following definition will be formulated:

(34) Vector Pricniple (=VP)

The concept of 'vector' governs the use of English demonstratives this and that. If the vector originates from Ego, then that is employed. If the vector originated from Nonego, then this is employed. The field of communication works as that of vector. The origin of it is the speaker. The magnitude of it will be specified in terms of the psychological variable.

Summing up, we have discussed in this section that there are examples which cannot be explained by the DP, the PP and the IP. By closely examining the empirical evidence available, such examples were found to be explained in a natural way if we propose the Vector Principle or the VP. The direction of movement and the origin of the vector was found to influence the employment of this and that.

2.5 Speaker Principle

In this section we will study on a principle of 'point-of-reference-shifting', which has been considered to be one dimension which governs the usage of English demonstratives this and that in the previous studies. The demonstratives this and that are used without verbally clarifying the point of reference. It remains implicit, but is, in most cases, the speaker.

Therefore, to comprehend the meaning of the demonstratives, one is required to shift the point of reference to the speaker irrespective of the location of the addressee and the topicalized object. The topicalized object is specified in terms of the speaker's point of reference. and the speaker is always considered to be the axis of the demonstratives. The rule that determines the axis of demonstratives is therefore required. This is the Speaker Principle or the SP.

The SP holds for every subprinciple of the LIP and the Vector Principle. Previous scholarship have tended to deal only with the interrelationship between the DP and the SP, as shown before. However, it should be noted that the SP subsumes the PP, the IP and the VP, too.

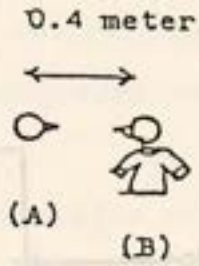
The evidence of the relationship beween the DP and the SP is illustrated in (2) in Chapter 1. That the DP subsumes the SP has been pointed out by many grammarians.

The SP holds for the PP, as illustrated in the following example:

(35) (A and B are standing side by side at about 0.4 meter apart. They are in a tailor's. B is looking for a good sweater to buy.)

A: Did your Mother knit <u>that</u> sweater?

B: ... (pointing to the sweater B wears) <u>This</u> sweater? Yes! My Mum is good at knitting.



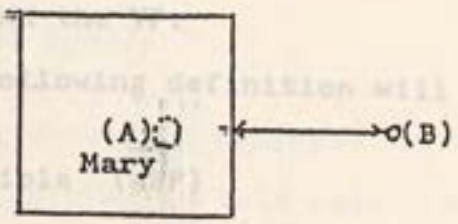
Here, A and B are standing close to each other. B must comprehend that <u>that</u> uttered by A has possibility of referring to the object which is in the vicinity of A's territory.

The IP is also concerned with the SP illustrated as follows:

(36) (A is hiding in a box. B draws near to the box. B sees the box and notices that someone is hiding in the box. B stands about 0.5 meter apart from the box.)

B: Who is <u>that</u>?

A: <u>This</u> is Mary!



Here, B is in the vicinity of A but cannot see the figure of A. Therefore, in virtue of the IP, that is employed. A, who is hiding in a box, should comprehend that B, who is near to A, is speaking to A. Then, A is needed to surmise the reason why B uses that, violating the DP. In order to interpret the meaning of that employed in this situation, A is required to employ the IP and the SP. A must shift the point of reference to B. Then, A must surmise that B employs that for the object in the vicinity of B in virtue of the IP.

The VP is also concerned with the SP. For example, in the case shown in Picture 18 on p. 57., the addressee is required to shift the point of reference and to understand that the speaker identifies the object in the physical space of the speaker by employing that in virtue of the VP.

Thus, the SP holds for the DP, the PP, the IP and the VP. In other words, the shift of point-of-reference subsumes the DP, the PP, the IP and the VP.

To summarize, the following definition will be presented.

(37) Speaker Principle (=SP)

> The use of demonstratives this and that is specified on the axis of the speaker's point of reference.

Although the definition shown above is fairly simple, it encompasses both cases of comprehension and production. The fact that the SP subsumes every principle of the LIP and the VP shows that the SP bears an important role in specifying the use of English demonstratives this and that.

At the beginning of this section, we stated that the demonstratives this and that are used without verbally clarifying the point of refernce, but the point of reference is, in most cases, the speaker. There is a reason why the present writer employed the word 'most' in this definition. That is, strictly speaking, there are cases in which the point of reference is not the speaker. The 'emphatic-point-of-reference' can take place in using this and that.

In the spontaneous speech of the English native speaker, the following example is observed by the present writer.

(38) (Misa is taking a picture of Mary. Misa has a camera in her hands. Mary poses for the picture.)

Mary: How is that?

In this case, this should be employed in virtue of the SP. However, that is employed in this case. How can this counterexample of the SP be explained?

The only possible solution might be that the speaker seems to shift the point of reference to the addressee. Hence, that is employed. The reason why the point of reference is shifted

might concern the psychological empathetic factors.

Thus, although the point of reference in using this and that is, in most cases, the speaker, it should be noted that there exist some cases in which the addressee is the axis in identifying the object by the use of demonstratives.

2.6 Conclusion

In this chapter, we argued that the usage of English demonstratives this and that is governed by three principles: the Language Internal Principle, the Vector Principle, and the Speaker Principle. The Language Internal Principle was considered to consist of three subprinciples: the Distance Principle, the Possessive Principle and the Invisible Principle.

We saw that it is reasonable to assume that the DP and the SP, which have been considered to govern the use of demonstratives, do not account for all the uses of them. In order to account for all the examples which violate the DP and the SP, we argued that the PP, the IP and the VP should be formulated on the basis of a fairly plausible assumption that the features underlying the counterexamples of the DP and the SP were classified into three types: the 'territory', 'visibility' and 'movement' types.

First, we showed in 2.1 that there are some examples which can be accounted for by virtue of such a definition as "this refers to the object which is near to the speaker and that refers to the object which is far from the speak-

er," and come to the conclusion that it is reasonable to formulate the Distance Principle. We studied the usage of both this and that. Neither of them involves serious difficulties concerning the definition of the distance/proximal on the axis of the speaker.

In 2.2, we paid attention to the fact that there are some examples which violate the DP. The analysis concerning the empirical evidence in PE provides the evidence for our assumption that the territorial conception of the speaker and the addressee influences the usage of the demonstratives this and that. Hence the Possessive Principle was formulated as one of the principles underlying the usage of demonstratives. We studied the correlation between the DP and the PP.

In 2.3, we saw that there is empirical evidence showing some cases of violation of the DP and the PP. We attributed the violation to the fact that the feature [+visible] might serve to influence the use of demonstratives. At this point, the Invisible Principle was formulated. Fillmore (1971) has pointed out that the feature of [−visible] concerns the feature of [-proximal]. He considers that the farther away the object is, the harder it is to be seen, and this is reflected in the use of yonder. In this thesis, we pointed out that the feature [-visible] concerns the feature [+proximal$_2$] (in

the individual space of the speaker) as well as [-proximal]. That is, even if the object in focus is in the vicinity of the speaker, that is employed if it is invisible and is out of the speaker's physical space. Furthermore, if the invisible object is in the physical space of the speaker but is behind the speaker, that is employed.

Fourthly, we saw that there are examples which cannot be explained by the DP, the PP and the IP. In order to account for those examples, we formulated the principle of vector (movement). That movement on the axis of the speaker concerns the definition of the usage of this and that has already been considered by Hewson (1971). His research and our analysis were discussed in 2.4.

In 2.5, we summarized the principles which were proposed in this thesis. we concluded that the DP, the PP and the IP are the subprinciples of the Language Internal Principle or LIP, and each principle holds for the Speaker Principle. We also mentioned that the subprinciples, the DP, the PP and the IP might also hold for the Vector Principle or the VP.

In this chapter, we focussed on the study of the LIP and VP on the axis of the Ego. We hope our analysis of of the system of demonstratives in terms of the parameter of distance, possession (territory), visibility, vector

(movement) and shifting-point-of-reference has contributed to the study on the system of English demonstratives this and that.

CHAPTER 3

ACQUISITION OF ENGLISH DEMONSTRATIVES

3.0. Introduction

This chapter addresses itself to the study of the development of demonstratives this and that in English speaking children from the cross-sectional and longitudinal points of view. The main purpose of this chapter is to examine the acquisition of the Invisible Principle, which is formulated as one of the principles that govern the use of English demonstratives this and that.

Fortunately, there is some previous scholarship concerned with the observational approach which focuses mainly on the developmental order and process which reflects the children's cognitive maturity. Other studies are concerned with the cross-sectional, experimental appoach. Most of these experiments study the acquisition of 'distance' and 'shifting-reference-point'. In other words, the previous approaches have concentrated on the acquisition of what we termed the Distance Principle and the Speaker Principle.

Clark and Sengul (1977) have studied what children must acquire to work out the meaning of the deictic contrast between this and that. They point out three problems children have to deal with.

(1) (a) Deictic terms all have a point of reference
(b) They involve shifting reference
(c) They may have shifting boundaries

On the basis of the problems shown above, they investigate the acquisition of demonstratives this and that in terms of two principles which correspond to our following two principles:

(2) (a) Speaker Principle
(b) Distance Principle

Clark and Sengul consider that children acquire the contrast between this and that and their underlying principles in terms of the point-of-reference-shifting and distance/proximal discrimination. On the basis of the experiments they argue that children go through at least three stages in acquiring the deictic contrast of this and that: children start with NO CONTRAST, work out a PARTIAL CONTRAST, which is used only in a certain context, and finally master a FULL CONTRAST equivalent to the system of an adult.

A theory of language acquisition can only be adequate when the nature of the adult system truly represents the target toward which the child's language is developing.

If the adult system of demonstratives consists of the five principles — the DP, the PP, the IP, the VP and the SP — as shown in Chapter 2, it becomes necessary to study the acquisition of this and that, compared with the adult system. How do children acquire each of the principles and get to the adult system of demonstratives?

In chapter 2, we formulated the following principles as those which govern the usage of the English demosntratives this and that in the adult system.

(3) (a) Language Internal Principle

(i) Distance Principle
(ii) Possessive Principle
(iii) Invisible principle

(b) Vector Principle

(c) Speaker Principle

On the basis of the principles shown above, it can be proposed that there are six aspects of the demonstratives this and that which have to be looked at in terms of the acquisition of the English demosntratives this and that.

(4) (a) No-semantic-contrast

(b) The contrastive distantial function

(c) The contrastive possessive function

(d) The contrastive invisible function

(e) The contrastive vector

(f) The reference-point-shift

It is assumed that the function of (4a) is considered to be the non-adult usage of this and that (or at least of less frequent usage in the adult system). (4b) will be considered in terms of the Distance Principle with speaker-oriented contrast. (4c) will be considered in terms of the Possessive Principle with speaker-oriented contrast. And (4d) will be studied with respect to the Invisible Principle with speaker-oriented contrast. The function of movement (vector) and the reference-point-shifting concerns every LIP or (4b), (4c) and (4d). The function of (4e) will be assumed to concern the Vector Principle which subsumes each subprinciple of the LIP. The function of (4f) will be assumed to concern the Speaker Principle which subsumes each subprinciple of the LIP, too.

As has been stated, some previous studies concentrated on the research on (4b) and (4f). That is, in previous studies on the acquisition of demonstratives, some psycholinguists have paid attention to the acquisition of the DP and the SP. However, no studies have focussed on the acquisition of the IP and the PP as far as the present writer knows. The acquisition of the VP has not been studied either.

In the present paper, it is assumed that the child approaches the task of demonstrative acquisition equipped with some principles. The child, on the basis of his/her innate endowment, cognitive development, experience and some other factors which trigger off the innate endowment learns to fix the value of parameters in the system of English demonstratives this and that in an ordered tuple.

The first part of this chapter will give a brief overview of previous research on the development of English demonstratives. By looking at the developmental process from the pre-linguistic stage through one-word-utterances, two-word-utterances, and the later stages, how the DP, the PP, the IP and the SP influence the acquisition of the system of demonstratives will be studied.

Next, a further investigation will be made into the language development of this and that in terms of the IP. The major part of this study is experimental, and will be reported in detail in 3.3.

3.1 An Overview of the Development of *This* and *That*

3.1.0 Introduction

The main purpose of this section is to discuss the previous studies by psycholinguists and linguists on the development of the deictic *this* and *that* and to consider the developmental processes of the deictic *this* and *that* in English speaking children.

Awareness of location is the basis of the logic of relations. A logic of relations is an important factor in later language development. One of the bases of Piaget's consideration on child's cognitive development is that conservation and perceptional reversibility in human cognition grows out of the early coordination of the sensorimotor schemata, in which awareness of location is the important feature of children's early speech. Awareness of location is, thus, a very fundamental conception which reflects on the development of language (See Piaget, 1967).

Many longitudinal studies have found that the deictic *this* and *that* have their origin in gestures —gazing, pointing and touching. In moving around to construct the perceptual space, child's sensorimotor performances seem to be shown in gestures, and deictic *this* and *that*

are found to appear early among the first words with the form of ah, eh, dis and dat (see Bates, Camaioni and Volterra, 197 Bruner, 1975; Clark and Sengul, 1977; Clark and Clark, 1978; Tanz, 1980). In children's two-word utterances, the deictic this and that are found to be commonly used, and such observations are reported to be true for the following languages at least: Chinese, Danish, English, Finnish, French, German, Japanese, Korean, Modern Hebrew, Italian, Quechua, Samoan and Swedish (Wales, 1979: 247).

Though demonstratives are among the earlist words English speaking children acquire, it is commonly accepted that the semantic contrasts between this and that seem to take several years to master. In other words, it is difficult to determine the extent to which children understand the full contrastive meanings of this and that.

In this section, we will give a general survey of the development of English demonstratives this and that.

3.1.1. A Survey of the Development of Demonstratives

The demonstrative function first appears in the prelinguistic stage.

Extralinguistic deixis is considered to be the origin of communication (Bates, 1976). Rommetveit (1968) discusses deixis as the basic mechanism for advancing information from the nonlinguistic context of speech to the spoken message.

Clark and Sengul (1977) consider that the demonstratives this and that originate from the gesture of pointing with finger. They observe that many studies of the spontaneous speech of children show that they begin pointing at an early age and then add demonstratives to their gestures. According to the observations of Clark and Sengul (Ibid.), although infants' first gestures may not be intended as communication, nevertheless they become so by the age of about one year. They state that "by six months, infants offer and show things — a rattle, the corner of a blanket, a finger — ; by ten months, infants begin to point to try to direct the adult's attention" (Ibid.: 457). In other words, before children begin to speak holophrases, they seem to use gestures for communication and they also seem to understand the communicative function of gestures by others.

As Clark and Sengul state, some Japanese psycholinguists find that children neither employ gestures communicatively nor comprehend the other person's gestures properly at an early age. That is, according to the previous studies, although children begin pointing and reaching, this does not necessarily mean that they have acquired the distance contrast. According to Hatano (1983), a Japanese at the age of 0;9 could comprehend the reference in focus when it was in the speaker's hand or in the speaker's physical space, but when the speaker pointed to the red ball which was put one meter away, the child was observed not to be able to comprehend the reference being pointed to — the child just looked around curiously. Hatano (Ibid.) also observed that the child at 0;7, carried in the adult's arms, could not comprehend what was referred to when the adult pointed to the moon in the sky — the child just looked at the adult's pointing finger.

Kubota (1982) also observed infant deictic behavior. Kubota (Ibid.: 217), studying infant comprehension of deictic pointing, observed that a girl "Y" at the age of 0;5 did not look in the direction the adult pointed. The girl "Y", however, by the age of 0;10, seemed to be able to comprehend the adult's deictic gestures and to identify

the object. At about 1;5, "Y" said "bow-wow", looking at the real dog, when adult said "bow-wow", pointing at a dog on television. This suggests that "Y" can identify the object in focus which is indicated by the gestures.

Tfouni and Klatzky (1981) state that "pragmatic deixis is assumed to be the very origin of communication acquired prior to the verbal system of deictic reference" (Tfouni and Klatzky, 1981: 124). Such theories might claim that gestural demonstratives are used by infants, firstly not communicatively, but later, in order to introduce reference, make command and get attention. The gestural aspect of referring to an object demonstratively continues in the later stage even after they become capable of uttering this and that.

At the one-word stage, infants who have indicated reference with the gestural deixis — gazing, touching, pointing, etc. — begin to add demonstrative words such as "da", "dis" and "dat". Nelson (1973) reports that these demonstratives occur in the earliest utterances, sometimes in the first ten words of an infant's speech. In Japanese, children are also observed to produce demonstrative terms in the one-word stage. The demonstratives ko-re, so-re and a-re appear in the form "ko-e", "eh", "ah" and "a-e" (Ōkubo, 1976).

Those demonstratives in one-word utterances have been analyzed as request, assertion and attention getting (Ingram, 1981; Wales, 1979),[2] and they are employed as the substituting nomination of the reference whose name the children do not know. That is, the first demonstratives do not express a semantic contrast, but they are used to simply express the feature [+deictic] (or [+entity], according to Tanz, 1980).

That the first demonstratives seem not to incorporate the semantic contrast but to occur in early speech as a nomination of the referential term has been observed by some linguists (e.g., de Villiers and de Villiers, 1981; Elliot, 1981). De Villiers and de Villiers (1981) report that their eleven-month-old son had a very effective routine for eliciting object names. That is, the child pointed "a stubby little finger in the general direction of object and says 'Dis?', to which the parents replied with the proper name of the object" (de Villiers and de Villiers, 1981: 246).

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[2] Although there are linguists who do not admit the grammatical construction in holophrases, there are, on the other hand, such linguists as Ingram (1981) who consider holophrases fundamentally carry the grammatical construction in themselves (See Ingram, 1981). In holophrases, the element which is less pragmatically expressive appears overtly as a word (Ibid.; Ito, 1982).

Tanz (1980) considers that the early utterances of children are all indexical and the distinction between deixis and full symbolic reference is in effect neutralized. The use of demonstratives as the 'substitutional nomination of refernce whose name is not incorporated in the vocabulary of the child' might show that the first feature children acquire is [+deictic]. The features [±proximal], [±possessive] and [±visible] seem to wait for the next stage to be acquired.

At the stage of two-word utterances, the demonstratives are commonly produced. Wales (1979: 342) states "... perhaps, even more striking is that they [=demonstratives] are used extensively in two-word utterances". According to Wales (Ibid.) and Clark and Sengul (1977), such an observation is true for several languages.

Bloom (1970) states that the example of "this"/"thats" is the most frequent construction at Kathryn II (MLU; 1.92, Age: 22.3 months old) as shown in Table 5.[3]

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[3]It is intriguing that demonstratives appear in what is termed as 'pivot' class. Although the notion of pivotal structures might have some problems, it is notable that demonstratives are found to appear in the same position in many young children's utterances, as shown in Table 5.

TABLE 5 .Examples of Uttarances with Demonstrative Pronouns, Where X is a Nominal Form (Bloom, 1975: 35)

Examples of Construction	Frequency of Occurrence
(1) This X. e.g.,This house, This mine, This my	16
(2) This X. e.g., This ə my, This ə slide, This ə much	36
(3) This X... e.g., This tiger book, This my tiger book	9
(4) This X... e.g., This ə tiber books, This ə Mommy celery	16
(5) That X. e.g., That dogs, That 'chine, That cleanings	38
(6) That X. e.g., That ə boys, That ə baby	31
(7) That X... e.g.,That bear book, That Kathryn hair	21
(8) That X... e.g., That ə bear book, That ə my Lois	13
(9) That's X. e.g., That's car	19
(10) /ðæts/ X. e.g., That's ə train, Thas ɔ beanbag	43
(11) That's X... e.g., That's mine toy, That's Kathryn my book	9
(12) /ðæts/ X... e.g.,Thas ə 'chine in there, That's ə on the table	15
(13) This is puppy book.	1
(14) This is sister.	1
(15) These X. e.g., These my, These mines	8
(16) These X... e.g., These my Kathryn's	2
(17) That this.	1
(18) This my this.	1
(19) This ə my this.	1

Bloom (1970: 40) states that at Kathryn (I), demonstrative pronouns "this", "thats" and their variants before nominal forms occur frequently.

These demonstratives are reported not to appear alone, but they are usually accompanied by gestures. According to Bloom (Ibid.), Kathryn's use of demonstrative pronouns appears to indicate a particular instance of the referent she names. Bloom considers that "the demonstrative pronouns used by Kathryn was not strictly deictic in the sense of pointing out the reference directly — for the sake of pointing it out. In every instance in which she used the construction, the referent named was manifest and Kathryn either looked at it or picked it up, or in the case of events, carried out the particular action she named (for example, "this turn," "this cleaning")" (Ibid.: 44).

Cross (1971) describes that gestural accompaniments of demonstratives are often observed, as shown in Table 6. Tfouni and Klatzky (1983) study acquisition of demonstratives by comparing the comprehension in a pragmatic condition (with a pointing gesture accompanying the utterance) with a semantic condition, and find that pragmatic use of the demonstratives facilitate comprehension for those children at 2;11-4;2.

Mean percentage scores of mothers' and children's use of demonstratives and locative adverbs with associated gestures (standard deviations in parentheses)

Utterance type	Mothers	Children
this	4.6(3.2)	7.0 (5.1)
that	25.5(5.6)	19.3 (8.4)
here	5.0(3.3)	16.8 (6.6)
there	14.0(5.4)	18.3(11.4)
the	31.9(6.5)	15.3(10.4)
a	19.6(5.1)	21.3(14.0)
Total number of these utterances	6026	3123
Mean (1/2hour)SESSION	402 (166)	208 (165)

Category of associated gesture	Mothers	Children
1. Pointing	7.4(2.9)	8.7 (6.5)
2. Handling-speaker, throughout	19.5(8.4)	41.2(12.1)
3. -speaker, putting down	2.9(1.6)	4.7 (3.7)
4. -listener, throughout	15.2(6.1)	4.2 (3.3)
5. -listener, putting down	1.7(1.6)	0.5 (0.7)
6. -picking up	8.2(3.4)	9.8 (2.8)
7. After putting down (speaker)	0.7(0.8)	1.0 (1.0)
8. No handling	21.9(4.4)	18.1 (7.7)
9. No concrete reference present	22.6(8.9)	12.3(10.2)

TABLE 6

As has been stated, although most children seem to employ demonstrative terms in the early stages, it has been found that children do not seem to know that this and that involve deictic contrasts. In other words, the features [±proximal], [±possessive], and [±visible] are not necessarily acquired even if the children can produce demonstrative terms.

For example, in the stage of two-word-utterances, demonstratives are observed to be often used as attention-getters (Shirley, 1933). Shirley (Ibid.) considers that the WH-question — "What's that?" — is used in the same way as "Look it!" in order to establish a close rapport with the addressee. As for the later stages, there are some observational data which seem to suggest that children do not seem to know the deictic contrasts involved in this and that. For instance, Snyder (1914) observes that a child at 2;5 used only that as the demonstratives. According to his statement, "It may be of significance that (the child) so often distinguishes between "this" and "that", or rather between two "that"s, indicating first one (object) and then the other ... by gesture." (1914: 420; See also Clark and Sengul, 1977: 460) The similar usage of demonstrative terms are found by Huxley (1970).

As to the acquisition of Japanese demonstratives, Murata (1967) observes that the para-question, "Ko-re na-ni?" ('What is this?') is often produced by infants at early stage to get attention of others.

However, analyzing the observaional data collected by diarists and linguists by taking the principles we have formulated into consideration, it is noticeable that children seem to properly employ this and that, thereby observing the DP, the PP and the IP.

As to the acquisition of the DP, we show the following observational data as those which suggest that the DP is apparently satisfied (See Table 7).

TABLE 7

As to the acquisition of the PP, we can present the following data as those which might suggest that the PP is apparently observed.

Firstly, in the observational data reported by Otsu (1971), we may find the potential ability of children of using the demonstrative that according to the PP.

Bloom (1970) observes "this" and "thats" in Kathryn I (1;8) produced in the following way.

Description of Speech Event	Kathryn's Utterance
(K wearing lavalier microphone, looking into a mirror) What do you see?	this necklace.
(K putting man into car)	this rides.
(K picking up a book about babies)	this baby book.
(K raking bolt L [Lois] offers her)	this turn.
(K screwing nut and bolt together)	fit. turn. thats turn.
(K turning nut and bolt)	this turn.
(K giving L her second slipper after L put her first one on)	this slipper.
(K picking up book)	this book.
(M [Mother] trimming K's fingernails)	this hand now.
(K helping M to dress her doll: K pulling at snap fasteners on bunting)	this button.

TABLE 7

Description of Speech Event	Kathryn's Utterance
(M putting a slipper on K)	this slipper
(K picking up another sock) That sock. Oh that's not a dirty one. That just has a big hole in it.	this sock.
(K picking up dirty sock)	this dirty.
(K putting second lamb into a block)	this window.
(K 'scrubbing' the wall in the bathtub)	this cleaning

(Bloom, 1970: 41-2)

Following are the data observed by Otsu. The present writer analyzes that they observe the PP.

(5) Byron (2;3): (Byron and I [Otsu] playing with toy telephone)
This is my telephone.
That's your telephone.

(6) Byron (2;3): No, that's yours.

(7) Byron (2;3): (Byron and I [Otsu] playing with toy telephone)
That's your telephone.

(8) Byron (2;3): That's not heavy. I mean this is heavy.
Yukio : How about this?
Byron : That's not heavy.

(9) Yukio : This is for you, and which is for me?
Byron (2;7) : That's for you.

(10) Byron (2;7) : That's for you.
Yukio : Can I eat it?

(11) Yukio : Is this your book or my book?
Byron (2;7) : That's mine...my book.

(12) Yukio : How about this one? Is this too big?
Byron (2;7) : No, that's not too big.

(13) Byron (2;8) : (Byron giving me [Otsu] a piece of sausage)
That yours. That yours.
Yukio : No, that's yours.
Byron : No, that's yours.

(14) Yukio : Big ball?
Byron (2;8) : Yeah, that's your big ball.

(15) Yukio : Is it your ball or my ball?
Byron (2;8) : That my ball. That's your ball.

(Underlining is by the present writer)
(Otsu, 1971)

De Villiers and de Villiers (1978) also observe the same kind of data, which seem to suggest the potential ability of children of employing the demonstrative terms according to the PP.

(16) Katie (2;6): Dat's yours.
Peter : That's mine. O.K. I'll keep that. Is that as well?
Katie : Dis is mine.
Peter : Hm-mm.

(Underlining is by the present writer)

It is notable that a child at 2;6 employs that for the object which is outside the territory of herself but employs this for the object which is inside the territory of herself, thereby observing the PP.

A child at 3;6 is also observed to employ that for the object which is in the vicinity of the speaker but is not in the territory of himself. The datum comes from Tough (1982).

(17) (Tommy and John are playing with a collection of toy vehicles. Tom picks up a car which John has put down a few minutes ago.)

John (3;6): That's mine... Give me that car -- 'cos it's mine.

(Underlining is by the present writer)

Tough (1982) paraphrases the datum shown above as follows:

> ... John's utterance,... shows that his [=John's] goal is to retrieve his possession which is in the dominancy of Tommy... The utterance will be paraphrased as 'Would you please give me my car because it belongs to me?... (underlined by the present writer).
>
> (Tough, 1982: 56)

This example might show that John at 3;6 can use that for the object whose features will be represented as [+proximal, -possessive, +visible], thereby observing the PP.

Finally, the present writer made the following observation.

(18) (Markie at 3;0 approaches Keiko. Markie is standing about 0.5 meter away from Keiko. Keiko is mending a broken Japanese hairpin.)

Markie: (Pointing at the hairpin) What's this?

Keiko : A Japanese hairpin.

Markie: It's your?

(19) (Jill at 3;6 and Linda are playing with a rabbit in a garden at ASIJ Nursery-Kindergarten. Linda and Jill are in the canonical position. Linda stands about 0.4 meter away from Jill)

Linda: I want some lettuce to feed the rabbit. (picking up a piece of lettuce on the ground.)
Jill : Oh! That's yukky!

(20) (Keiko shows a small Japanese ornamental hairpin to Ben at 3;8. Ben is about 0.3 meter apart from Keiko and they are standing side by side.)

Ben : What's that?

(21) (Raphael at 4;3 notices that Keiko, standing in front of him about 0.5 meter away, has a burglar alarm in her hand.)

Keiko : Do you know what it is?
Raphel: I don't know. What's that?

(22) (Mark at 4;5 and Keiko are about 0.3 meter apart. He approaches Keiko who is putting dolls and stationery in her bag. Mark tries to look into the bag.)

Mark:: What's that?
Keiko: This is Mickey.
Mark : (Finding a purse) What's that? (pointing)
Keiko: Guess what this is, Mark. (Having the purse)
Mark : I think it's money.

(23) (A doll, Bunny, is introduced to the child by Keiko. Keiko makes Bunny hold a Japanese fan which might be an unfamiliar object for English speaking children. Bunny is put 0.5 meter away from the subject. The child sitting next to Keiko. The child is interviewed individually.)

Keiko: Do you know what Bunny has in her hands? If you don't know the name of the thing she has, ask Bunny what she has. She will tell you!

Clare (3;2): What is it?
Michele (3;9): What is this? (pointing)
Brook (3;10): What is that? (pointing)
Sabine (3;11): What is that?
Lawren (3;11): What is that? (pointing)
Lisa (3;11): What's that?
Alexandna((4;5): What's that?
Brett (4;8): What is that?

(24) (Mikhal at 5;10 notices that Keiko, standing beside her about 0.5 meter away, has a stuffed animal in her hands.)

Mikhal: What's that?
Keiko : What do you think this is?
Mikhal: Is that a bear?
Keiko : Yes, it is.

The observational data (6) through (24) might show that children who were in the vicinity of the addressee employed that, thereby observing the PP.

It is hard to determine whether or not the children who employ that for the object which is not in the territory of the speaker can be regarded to have acquired the PP. There is a possibility that the children who have apparently acquired the PP use that for every object which is not in the physical space of himself/herself. That is, from the fact that children can employ that for the object which is in the individual space of themselves but is not in their 'territory', we can not necessarily conclude that they have acquired the PP.

In order to validate the acquisition of the PP, therefore, it must be examined whether or not the children can employ this for the object which is in the individual space of themselves and is psychologically in their territory as a contrastive examination.

In other words, in order to investigate the acquisition of the PP properly, we should examine if children can employ this for the object whose features are represented as [+proximal$_2$, +possessive, +visible]. As a comparative test, an examination should be conducted to see if children can employ that for the object whose features are represented as [+proximal$_2$, -possessive, +visible]. This is the area for the future study.

Finally we will touch the acquisition of the Speaker Principle.

Speaker Principle acquisition is considered to be one of the most basic and important principles children have to acquire.

Speaker Principle acquisition is closely related with the children's cognitive development; especially their egocentrism and decentrism. Here it should be mentioned that the term 'egocentrism' is not to be viewed as a human personality trait but rather it denotes the children's frame of point of reference. During preoperational period (ages 2 to 4). the children are considered to be egocentric and put themselves as the center of the point of reference. They use themselves as the standard of judgment, and they cannot take the viewpoint of other people (See Piaget, 1950; Sigel and Cocking, 1977).

IH order to comprehend the demonstratives this and that, children are required to make judgments opposite to what they see from their own vantage point, in case the speaker is in the canonical position to the addressee (children). That is, in order to employ the demonstratives this and that, children need to look at the world through the eyes of others as well as from their own egocentric point of view. If the speaker and the addressee are sitting in the canonical position and the speaker utters "this", the addressee must know that "this" refers to the object near to the speaker, but not near to the addressee himself/herself. Thus, as this and that are specified in terms of the position of the speaker, decentrism carries the important parameter in terms of the comprehension of this and that.

Webb and Abrahamson (1976) study the comprehension of this and that. They find that the half of the subjects in seven-year-old group showed the egocentric understanding of the demonstratives this and that, interpreting this as always referring to the object which is the closest to themselves, and that as referring to an object far from their own location. Clark and Sengul (1977) also verify experimentally that in the transitional stage of SP acquisition, there is a general bias to select objects close to the child.

These studies also suggest that if children were unable to construct the reference system of the other person's viewpoint in reference to the position of objects at their own point, the acquisition of the SP will not be acquired, either; decentrism carries an important cognitive parameter in acquiring the system of demonstratives this and that.

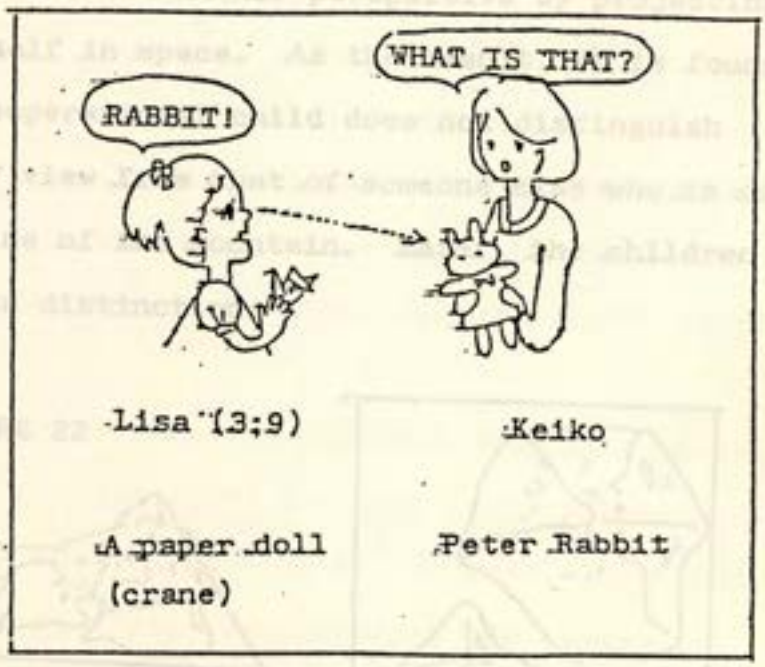
The present writer also observes that a child in the preoperational period cannot shift the point of reference in comprehending the demonstratives when the child and the present writer (speaker) are in the canonical position.

On October 19, 1984, at ASIJ Nursery-Kindergarten, a child named Lisa at the age of 3;9 approached the present writer, who was conducting a small experiment. The present writer was holding a doll —Peter Rabbit — in her hand. Lisa wanted to show a different paper doll she had made by herself to the present writer. So she stood near to the present writer in the canonical position. The present writer stopped the experiment and turned to Lisa. Lisa had a paper doll of a crane; the present writer had a rabbit doll. The present writer asked Lisa, "What is that?" in order to know what Lisa had in her hand, expecting the answer "This is a crane made of paper."

However, her answer was "Rabbit!" She interpreted that, not putting the center of the viewpoint on the speaker but on herself, and without shifting the perspective from the speaker. As the present writer employed that in virtue of the Possessive Principle, this observational data provides proof of the child's inability to discriminate between the PP and the SP.

(25) (Lisa at 3;9 and Keiko, an Experimenter, are sitting in the canonical position. Lisa has a paper doll in the hand, and Keiko has a doll (Peter Rabbit) in the hands.)

Keiko (Experimenter): What is that?
Lisa (3;9) : Rabbit!



PICTURE 21

"Children are egocentric with respect to representation and symbolic activities" (Sigel and Cocking, 1977: 47), and it is during preschool years when the gradual move away from egocentrism is found. According to Piaget and Inhelder (1967), it is found that many younger children of 7;6-9;5 could not define the position of objects in relation with other persons' view-points at any points. Their basic experiment was the one in which they ask a subject to judge how he/she sees a mountain scene as shown in picture 22. The subject was tested individually. He/she was asked how mountain scene would look if someone (doll) were on the other side of the mountain. In this experiment, Piaget and Inhelder investigate if the subject can look at the mountain scene from another perspective by projecting himself/herself in space. As the result, it is found that the preoperational child does not distinguish her point of view from that of someone else who is on the other side of the mountain. Later, the children can make this distinction.

PICTURE 22

(Piaget and Inhelder, 1967: 211)

So far, we have surveyed the acquisition of demonstratives. The acquisition of the IP will be discussed in the proceeding section.

It is difficult to determine when children acquire the features of [+deictic], [±proximal], [±possessive] and [±visible]. In this thesis, we refrain from defining the acquisitional order of the features, but instead, propose a hypothetical process for the acquisition of this and that.

As Clark (1971: 266) says, "adult, though, all too often assume that when a child begins to use a new word, he knows what it means, and furthermore uses it in the same way that an adult would." "However," he continues, "since the child's general knowledge at age 3;0 is much more limited than the adult's, this does not seem to be a very plausible assumption to make." According to him, "a more reasonable hypothesis is that the child only partially learns meaning of a new word." Thus, children seem to learn some of the features of this and that at different stages, adding to this knowedge as they find out more about the features underlying the usage of the English demonstratives this and that.

What has been said in the previous studies suggests that children can utter this (dis) and that (dat) accompanying pragmatic aid at very early stages. However, this does not always mean that children have acquired the semantic

contrast of these terms. Several observers have noted that there seems to be no discernible semantic contrast between the deictic this and that children use as late as age four (See Clark and Sengul, 1971: 461). Usually at an early stage, a child employs this and that accompanied by some gesture — pointing, touching and reaching. However, suppose, for example, a child cannot comprehend the reference specified by a speaker using demonstratives without any pragmatic aid. He/She cannot then be regarded as having acquired the DP linguistically.

However, is it valid to state that children have not acquired the DP even if they can employ the deictic this and that with the aid of pragmatic factors? It seems to the present writer that pragmatic aids, such as pointing, touching and reaching, are prelinguistic demonstratives, and that these are the original forms of the demonstratives this and that. If this is so, the distance and proximal distinctions, which can be specified in terms of the typological concept, begin at the pre-linguistic stage. Though it might be as late as age four when the DP acquisition is completed, the original semantic contrast seems to start after they use this and that as the nomination of referents whose names they do not know and for attention getting.

The demonstratives this and that incorporate the feature [+deictic]. According to Tanz (1980), this and that are the deictic terms whose indexical function is routinely supported by physical gestures of indication. The necessity of pointing is symptomatic of the indefiniteness of the meanings of this and that. In this sense, Tanz considers that this and that are more deictic terms than the other deictic terms. Therefore, the feature [+deictic] is the dispensable factor which determines the meaning of this and that. Hence, it leads one to the assumption that examining children's ability in terms of the demonstratives this and that without any pragmatic aid implies that the feature [+deictic] is obscured -- or at least, is lessened in its quality and quantity. Therefore, even if children do not employ this and that without pragmatic aid, this does not necessarily mean that children have not acquired the DP. Rather, if children do not employ this and that without pragmatic factors, it is more logical to assume that the reason is because the feature [+deictic] is obscured in this and that. That is, because one of the features underlying the usage of the demonstratives this and that is obscured, children do not employ this and that well. Even for adults, it is difficult to comprehend

the demonstratives without any pragmatic aid. This means that for adults, if the feature [deictic] is lacking, the employment of this and that will be more difficult. Tfouni and Klatzky (1983) verify experimentally that the comprehension with pragmatic aid is more easy for children than that with no pragmatic aid.

Children begin to indicate spatial relationship by employing gesture. For children the feature [+deictic] might be the dominant feature in comprehending and producing the deictic this and that. That children cannot employ this and that without pragmatic aid does not necessarily mean that they have not acquired the DP. It seems to be more logical and natural to consider that DP acquisition begins early, and on the basis of this, experiments in terms of DP acquisition seem to be needed.

On the basis of such considerations, we propose accordingly that the acquisition of the subprinciples of the LIP proceed in the following way: (1) no semantic contrast; (2) no semantic contrast by [+deictic] (3) [±proximal] is acquired; (4) [±possessive] (5) [±visible]. This assumption is proposed on the basis of the observational data available. However, it should be noted that this acquisition order is not verified experimentally. The problem concerning the acquisitional order demands also

more delibrate investigation in terms of the degree of the pragmatic factors concerning the acquisition of the principles underlying the usage of English demonstratives this and that. In order to propose an hypothesis as to the order, further, more detailed, experimental and observational study is required.

In order to make a steppingstone toward the study of demonstratives, we focus, in the next section, on the acquisition of the Invisible Principle or the IP which might be one of the principles that govern the usage of English demonstratives this and that.

3.2. A Study on the Acquisition of the Invisible Principle

3.2.0. Introduction

The general pattern of development of the demonstratives, and the acquisition of the Distance Principle and the Speaker Principle which govern the use of them, has been extensively studied in prior research, some of which has been discussed in the previous section. These studies have investigated when and how the demonstratives this and that are produced and comprehended. These studies have revealed consistencies in both the order and age of native speakers concerning the acquisition of DP and SP. There has as yet, however, been no attention given to the acquisition of IP which is assumed to be a subprinciple of the LIP of the English demonstratives this and that. Hence this section will discuss when and how children recognize and produce the parameter [-visible] in their lexical system when using the demonstrative that.

The organization of this section is as follows: in section 3.2.1, we will examine the observaitonal data in terms of "invisible — that" (which means that which is emoloyed for referring to the object which is invisible, irrespective of the distance from the speaker), and state the hypothesis that the IP will

be acquired in the order (this)-it-that. As to the age, it will be found that in their third year, children begin to acquire the IP. In section 3.2.2, we will discuss the data from the IP experiments and the hypothesis (based on observation) will be shown to be valid.

3.2.1. Observation

Before going to the experimental studies, it is necessary to propose a hypothesis. Thus, the observational data available of the demonstrative for invisible objects produced by English-speaking children must be discussed.

Huxley (1970) provides a datum in which Katorina at the age of 2;6 uttered it instead of that for an invisible object (sound, in this case).

(26) Now I can hear it.

In this situation, it is not anaphoric, but deictic.

Otsu (1972) observes that Bynon at 2;7 of age produced this instead of that for the invisible object (sound).

(27) (Byron, Mommy and I [Otsu] listening to a record of Jack and the Beanstalk).

B: This is Giant.

M: Oh, that's a Giant. (Underlining is by the present write

(Otsu, 1971: 47)

As we see in the utterance of Mommy in (27), the demonstrative employed by adult English speakers in the situation above is that; this is because the object in focus is invisible. Nevertheless, in (26), it is employed instead of that; in (27), this is employed instead of that.

Further evidence for children's trends for using it and this instead of that for invisible objects is observed by the present writer.

(28) (The experimenter shows a small blue box in which a Japanese smelling bag is hidden. The smelling bag has a ring inside, so when the box is shaken, the ring tinkles. The experimenter draws near to each subject, shaking the box and making the ring of the smelling bag tinkle. Tinkling the ring, the experimenter looks at the subjects.)

Marky (3;0): What is it? What is this? (Uttering this, he points at the box.)

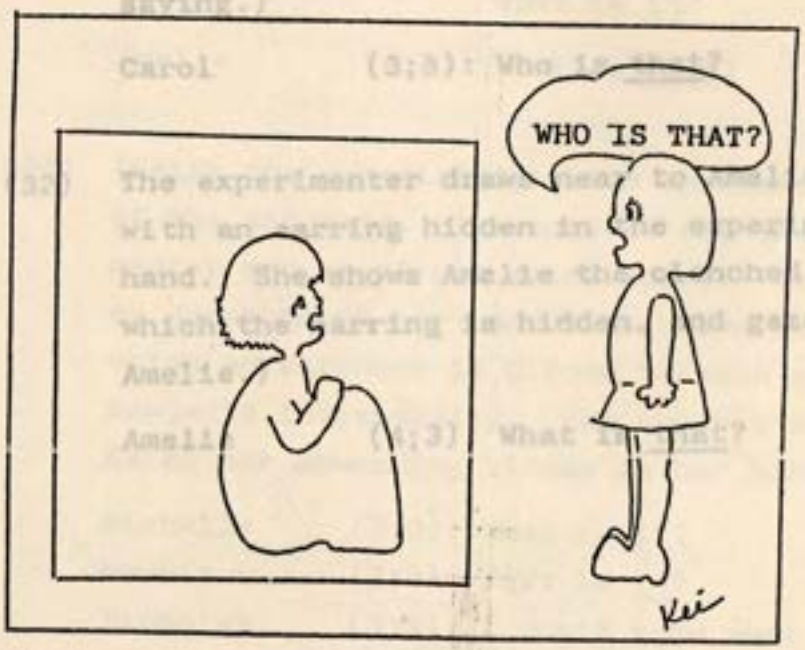
Michael (3;8): What is <u>that</u>?

Mark (4;6): What is <u>there</u>?

(29) (Children are playing a hide-and-seek game. A boy is hidden under a plastic box. A girl Maddy at 3;4, finds someone hiding in the box. Maddy draws near to the box, stands in front of the box about 0.5 meter away and looks into the bok. Maddy says:)

Maddy (3;4): Who is <u>that</u>?

a boy Maddy



PICTURE 23

(30) Some children are playing in a class room at ASIJ Nursery-Kindergarten. Jill (3;2) and Annette (3;9) notice the song from a tape-recoder about three meters away.)

Jill (3;2): That's a tiger.

Annette (3;9): That's a duck.

(31) Some children are playing in a doll's house in the garden of ASIJ Nursery-Kindergarten. Someone knocks loudly on the window from outside the doll house. Carol (3;8), being surprised, rushes out of the doll house, saying.)

Carol (3;8): Who is that?

(32) The experimenter draws near to Amelie (4;3) with an earring hidden in the experimenter's hand. She shows Amelie the clenched hand in which the earring is hidden, and gazes at Amelie.)

Amelie (4;3): What is that?

(33) The experimenter, hiding an earring in her hand, draws near to each of the subjects. The experimenter shows each of the subjects her clenched hand in which the earring is hidden and stares at the subject.)

Kay	(3;0):	I think <u>it</u>'s a code. (Uttering "it", Kay tries to look into the experimenter's hand.)
Marky	(3;0):	What is <u>it</u>? What is <u>it</u> there?
Claire	(3;0)	What is <u>it</u>? What is <u>it</u>?
Amelie	(4;3)	What is <u>that</u>?

(34) (Keiko the experimenter, sits in front of each of the subjects. The subject and the experimenter are about 0.5 meter apart. Keiko has an earphone in her hand; she shows her hand in which an earphone is hidden to each of the subjects individually. The subject knows that Keiko has something hidden in her hand.)

Michelle	(3;0):	What is <u>it</u>?
Markie	(3;0):	What is <u>it</u>?
Nicholas	(3;5):	I don't know what <u>it</u> is.
Michael	(3;9):	What is <u>that</u>?
Faesal	(4;10):	What is <u>that</u>?
Kelly	(5;8):	What is <u>that</u>?

PICTURE 24

(35) ADULT : What is that?

Edward (3;7): What's that? (trying to see a snake in a hole in a log in a glass cage.)
I'll see it, I'll see that.

Ben (3;8): What's that? What's that? Snake?! (being surprised at seeing a snake coming out of a hole in a log in a glass cage.)

Matthew (4;10): (looking at a snake through a glass cage)
That is a snake.

(36) (A burglar alarm suddenly rings near each of the subjects but the subjects can't see the alarm)

Marissa (3;2): What's that?
Ben (3;8): What's that?
Stephen (4;4): What's that?
Justin (4;5): What's that?
Gen (4;6): What's that?
Nicola (4;10): What's that?
Faisal (4;10): I think that's a bell.

To summarize the observational data available:

TABLE 8

Age	Utterances		Observer
2;6	I can hear it.	(sound)	Huxley
2;7	This is Giant.	(sound)	Otsu
3;0	What is it?	(sound)	Murasugi
3;0	What is it?	|	
3;0	I think it's a code.	(substance is in Exp.'s hand)	
3;0	What is it?	|	
3;0	What is it?	|	
3;0	What is it?	|	
3;0	What is this?	(sound)	
3;1	What is it?	(substance is in Exp.'s hand)	
3;2	What's that?	(sound)	
3;2	That's a tiger.	|	

Age	Utterances	Observer
3;3	What's it?	(substance is in (Murasugi) Exp.'s hand)
3;4	Who is that?	(sound)
3;5	I don't know what it is.	(substnce is in Exp.'s hand)
3;8	What's that?	
3;8	What's that?	(sound)
3;8	What's that?	
3;9	What's that?	
3;9	That's a duck.	
4;3	What is that?	(substance is in Exp's hand)
4;3	What's that	
4;4	What's that?	(sound)
4;5	What's that?	
4;6	What's that?	
4;6	What is there?	
4;10	What is that?	
4;10	That is a snake.	(substance is hard to see)
4;10	I think that a bell.	(sound)
5;8	What is that?	(substance is in Exp.'s hand)

(Exp. = Experimenter)

Summary of the Observational data

Age	Demonstrative	
	sound	Invisible Substance
2;6	it	
2;7	this	
3;0	it	it
	it	it
	this	it
3;1		it
		it
3;2	that	it
	that	
3;4	that	
3;5		it
3;8	that	that
	that	
	that	
3;9	that	
4;3		that
4;4	that	
4;5	that	
4;6	that	
	there	
4;10	that	that
	that	
5;8		that

TABLE 9

On the basis of the above developmental studies on the acquisition of the IP from the observational data available, the general ontogeny of the demonstrative that for invisible objects can be characterized as a progressive transition from this and it to that. That is, we theorize that the developmental process which was previously observed in first-language-acquisition in terms of the IP may be described as this/it-that development. The developmental process of the IP in demonstratives has been strongly documented in the observation of spontaneous speech.

Based on the observational data above, we propose the following hypotheses to test the general thesis.

1. The acquisition of the Invisible Principle in terms of English demonstratives proceedes gradually.
2. There are three key steps in learing to correctly use that for an invisible object-- whether the latter is within the vicinity of the speaker or not. The steps are named the this/it-that developmental process. That is, it seems the child firstly employs this for the invisible object accompanied by gestures; secondly, the child employs it; and finally that will be

acquired. This and it are the primitive linguistic manifestations of a child's deictic demonstrations of an invisible object.

3. The observational data collected by diarists and linguists suggest that up until the age of about 3;3-3;5, children frequently use it for an object which is invisible and within the vicinity of the speaker. In adult grammar, in this situation, that would be a more natural term for indicating an object which is invisible to the speaker.

3.2.2 Experiments

3.2.2.0 Introduction

In this section, we intend to test, using a cross-sectional experimental method, when and how the child acquires the Invisible Principle (IP) with respect to the acquisition of English demonstrative that.

As we already stated, three independent parameters — distance, invisibility and possession — which are specific to English are considered to underlie the use of the demonstratives and, are reflected in the linguistic experience and the cognitive maturity of the child.

The following experiment is intended to assess children's competence, mainly in the production of that for an object with the features of [+proximal], [-visible] and [±possessive] (the value of the [±possessive] is neutral). The acquisition of one of the Language Internal Principles (LIP), the Invisible Principle (IP), will be investigated.

In order to test the acquisition of the IP closely, the other feature [±backness] was incorporated to investigate whether or not the feature [+backness] produces an effect on the result.

The features [+visibility] and [+backness] were tested in two ways : (i) by hiding an object in a bag and (ii) by covering the subject's eyes.

The experiments consisted of five parts: Part 1 — to determine the acquisition of this for a [+visible] object — and Parts 2-5 — to determine the acquisition of that for a [-visible] object.

In Part 1, the subjects were tested to see if they could use this for an object with [+visible] and [+proximal] features. Part 1 is intended to provide a contrast with Parts 2-5.

In Parts 2-5, subjects were tested to see if they could use that for objects with [-visible] and [+proximal] features.

In Parts 2-3, the object itself was invisible. It was put into a bag; in Parts 4-5, the subject was ordered to shut his/her eyes (though the object was not hidden as in Parts 2-3). In Parts 2 and 4, the object was put in front of the subject; in Parts 3 and 5, it was put behind the subject.

The experimental methods — Parts 2-5 — can be classified in a 2x2 contingency table:

TABLE 10

	front	back
covering-Subject's-eyes-task	Part 3	Part 5
Hiding-an object-task	Part 2	Part 4

In this experiment, the 'elicited production method' was used to investigate the acquisition of the IP in terms of English demonstratives. As the eliciting sentences, "What is this?" and "What is that?" were employed. It is necessary at this point to mention why the WH-questions, the eliciting quesitons, "What is this?" and "What is that?" were selected for the test sentences. This is for the following reasons. First, even though WH-questions are acquired at later stages, "What is this/that?" are reported by many diarists and linguists to be both produced and

comprehended at a very early stage, even at the level of two-word utterances. Second, when checked with three adult native English speakers, it seems that the less well known the object is to the speaker, the greater is the likelihood of the usage of that for both the invisible object and the object beyond his/her own territory.

3.2.2.1 Procedures

Subjects

The subjects were 26 native English speaking children ranging in age from 3;0 to 4;10. They were drawn from ASIJ Nursery-Kindergarten in Meguro-ku, Tokyo, Japan. The socio-economic status of the subjects' families were middle class. These children also spoke a second language.

They were divided into two age groups, each of which consisted of 13 children:

Group I, n=13, 3;0 - 3;11

Group II, n=13, 4;0 - 4;10

Materials

Part 1

A Japanese hairpin, a Japanese fan made of Japanese paper and a burglar alarm were prepared.

Part 2 - Part 5

Pictures of Mickey Mouse, Pluto and Bunny were drawn on 17x24 c.m. cards (see Appendix). Three dolls of Mickey Mouse, Pluto and Bunny were prepared, too.

All utterances were taperecorded by a Sony stereo cassette recorder magnetophone: a cassette sterec recording machine Walkman WM-R2.

Pretest

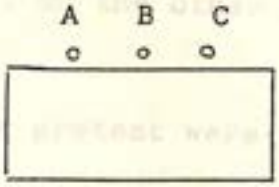
The subjects were tested individually. They were presented with a set of pictures of Mickey Mouse, Pluto and Bunny put seven feet away in order to determine his/her ability to identify the three names of the animals. Upon being presented with the three pictures, the subject was introduced to those three dolls: Mickey Mouse, Pluto and Bunny, which were put in front of him/her.

In order to test the acquisition of Distance Principle the subject was asked to idendify the dolls in front of him/her and the pictures of the dolls were put seven feet away. The experimenter asked two questions: "What is this?" and "What is that?" without giving any pragmatic aid --e.g., gazing, pointing and touching.

The child who passed the pretest was told that he/she was going to play a game with the experimenter.

Part 1

The subject and the experimenter were seated on the floor next to each other. An assistant was introduced, seated next to the subject, on the other side of the experimenter.



A=Experimenter
B=Subject
C=Assistant

Figure 3

The experimenter showed the subject (i) a Japanese ornamental hairpin, (ii) a Japanese fan, (iii) a burglar alarm. The experimenter put one of the three in front of the subject 0.3 meter away and said, "If you don't know the name of the thing you see in front of you, ask Keiko (who is the assistant of the game) 'What is this?' or 'What is that?'"

In the course of experiment each material was put just in front of the subject, and on each trial the material was equally distant from the subject. The sentences, "What is this?" and "What is that?", which were presented by the experimenter, were given in randomly varied turns.

Part 2

The subject and the experimenter were seated on the floor next to each other. An assistant was introduced, was seated next to the subjects, on the other side of the experimenter.

The subjects who passed the pretest were told to play a 'hide-and-seek game'.

The experimenter showed a bag and three dolls: Mickey Mouse, Pluto and Bunny. The toys to be manipulated were put in a line in front of the subject. After the subject was able to identify the the pictures put seven feet away and the dolls put two feet away, the experimenter said, "I'm going to put a doll either Mickey Mouse, Pluto or Bunny into the bag in front of you. You cannot look into the bag, but just ask Keiko (who is the assistant of this game), 'What is this?' or 'What is that?'. Now, close your eyes, and I'll hide a doll." Later the subject opened his/her eyes, guessed, and said, "What is this?" or "What is that?"

When the subject asked either "What is this?" or "What is that?", an assistant pulled the doll out of the bag; the doll was shaken up and down: "Hello, my name is Mickey (Pluto, or Bunny)!" The convention was established that when the assistant taught the name of the doll to the subject, the subject was asked to take the picture card upon which the image of the doll was drawn.

The sentences "What is this?" and "What is that?" presented by the experimenter were given in randomly varied turns.

This experiment was held four times per subject; on each trial the materials were equally distant from the subject.

Part 3

The subject and the experimenter were seated on the floor next to each other. An assistant was introduced, was seated next to the subject on the other side of the experimenter.

The subjects who passed the pretest were told to play a 'hide-and-seek game'.

The experimenter showed three dolls: Mickey Mouse, Pluto and Bunny. The dolls were put in a line in front of the subject. After the subject was able to identify the pictures put seven feet away and the dolls put two feet away, the experimenter said, "I am going to put a doll either Mickey Mouse, Pluto or Bunny behind you. You cannot peep but just ask Linda (who is the assistant of this game), 'What is this?' or 'What is that?'. Now, cover your eyes. I'll put a doll either Mickey Mouse, Pluto or Bunny behind you." Then, the subject covered his/her eyes, guessed, and said, "What is this?" or "What is that?" without peeping.

When the subject asked either "What is this?" or "What is that?" the experimenter said, "Well, open your eyes and see what it is." When the subject opened their eyes, an assistant shook the doll up and down and said, "Hello, my name is Mickey (Pluto, or Bunny)!" The convention was established that when the assistant taught the name of the doll to the subject, the subject was asked to take the picture upon which the image of the doll was drawn.

The sentences "What is this?" and "What is that?" presented by the experimenter were given in randomly varied turns.

This experiment was held four times per subject; on each trial the materials were equally distant from the subject.

Part 4

The subject and the experimenter were seated on the floor next to each other. An assistant was introduced, was seated next to the subject, oh the other side of the experimenter.

The subjects who passed the pretest were told to play a 'hide-and-seek game'.

The experimenter showed a bag and three dolls: Mickey Mouse, Pluto and Bunny. The toys to be manipulated were put in a line in front of the subject. After the subject was able to identify the pictures put seven feet away and the dolls put two feet away, the experimenter said, "I'm going to put a doll either Mickey Mouse, Pluto or Bunny into a bag behind you. You cannot look into the bag, but just ask Keiko (who is the assistant of this game), "What is this?" or "What is that?". Now, close your eyes, and I'll hide a doll." Later the subject opened his/her eyes, guessed, and said, "What is this?" or "What is that?"

When the subject asked either "What is this?" or "What is that?", an assistant pulled the doll out of the bag; the doll was shaken up and down: "Hello, my name is Mickey (Pluto, or Bunny)!" The convention was established that when the assistant taught the name of the doll to the subject, the subject was asked to take the picture upon which the image of the doll was drawn.

The sentences "What is this?" and "What is that?" presented by the experimenter were given in randomly varied turns.

This experiment was held four times per subject; on each trial the materials were equally distant from the subject.

Part 5

The subject and the experimenter were seated on the floor next to each other. An assistant was introduced, was seated next to the subject on the other side of the experimenter.

The subjects who passed the pretest were told to play a 'hide-and-seek game'.

The experimenter showed three dolls: Mickey Mouse, Pluto and Bunny. The dolls were put in a line in front of the subject. After the subject was able to identify the pictures put seven feet away and the dolls put two feet away, the experimenter said, "I am going to put a doll either Mickey Mouse, Pluto or Bunny in front of you. You cannot peep but just ask Linda (who is the assistant of this game), 'What is this?' or 'What is that?'. Now, cover your eyes. I'll put a doll either Mickey Mouse, Pluto or Bunny in front of you." Then, the subject covered his/her eyes, guessed, and said, "What is this?" or "What is that?" without peeping.

When the subject asked either "What is this?" or "What is that?", the experimenter said, "Well, open your eyes and see what it is." When the subject opened their eyes, the assistant shook the doll up and down and said, "Hello, my name is Mickey (Pluto, or Bunny)!" The convention was established that when the assistant taught the name of the doll to the subject, the subject was asked to take the picture card upon which the image of the doll was drawn.

The sentences "What is this?" and "What is that?" presented by the experimenter were given in randomly varied turns.

This experiment was held four times per subject; on each trial the materials were equally distant from the subject.

3.2.2.2 Results and Discussion.

Results

Part 1:

The subjects produced this for the object which is [+visible] and [+proximal]. The result of the part 1 test is given in Table 11 on p. 140.

The followings are some of the examples.

(37) (The experimenter puts a Japanese hairpin in front of the subject. The subject sees the object.)

Experimenter: If you don't know what it is, ask Keiko 'What is this?' or "What is that?'

Subject (Answer type) : a. What is this?
b. (No answer)

Table 16 shows the percentage of that answers for each of the trials.

Part 2:

The result of the Part 2 test is given in Table 12 on p. 141. There were four types of answers. First, some subjects employed that. Second, some subjects employed it. Third, some subjects employed this making, at the same time, some gartures --pointing, patting and holding the bag (which suggests that they are incorporating the object which is invisible in their individual space). It should be noted the three types shown above are all correct usage of English demonstratives. However, the first is considered most natural for referring to the object which is [-visible], whether or not it is in the vicinity of the speaker. However, some subjects employed there. In this thesis, the subjects who employed there are assumed to have learned the feature [-visible].

The following are some of the examples:

(38) (The experimenter hides Mickey Mouse in a bag and put it in front of the subject. The subject's eyes are averted while the experimenter puts the doll in the bag.)

Experimenter: Now, open your eyes.
There is something in the bag.
Ask Keiko 'What is this?' or

'What is that?', and she'll tell you what I have hidden in the bag.

Subject (Answer type)	:	a. What is that? b. What is there? c. What is it? d. What is this? e. (No answer)

Table 17 shows the percentage of that answers for each of the trials.

Part 3:

The result of the Part 3 test is given in Table 13 on p. 142. There are four types of answers. First, some subjects employed that. Second, some subjects employed it. Third, some subjects employed this making, at the same time, some gestures —pointing, patting and holding the bag (which suggests that they are incorporating the object which is invisible in their individual space). It should be noted that the three types shown above are all correct usage of English demonstratives. However, the first is considered most natural for referring to the object which is [-visible], whether or not it is in the vicinity of the speaker.

The following are some of the examples:

(39) (The subject's eyes are covered. The experimenter puts Mickey in front of the subject. The subject is told not to peep.
Experimenter: 'Don't peep but just ask Keiko 'What is this?' or 'What is that?', and Keiko will tell you what is hidden in the bag.

Subject (Answer type) :
a. What is that?
b. What is it?
c. What is this?
d. (No answer)

Table 18 shows the percentage of <u>that</u> answer for each of the trials.

<u>Part 4:</u>

The result of the Part 4 test is given in Table 14 on p. 143. There are four types of answers. First, some subjects employed <u>that</u>. Second, some subjects employed <u>it</u>. Third some subjects employed <u>this</u>, making, at the same time, some gestures --pointing, patting and holding the bag (which suggest that they are incorporating the object which is invisible in their individual space). It should be

noted that the three types shown above are all correct usage of English demonstrative. However, the first is considered most natural for referring to the object which is [-visible], whether or not it is in the vicinity of the speaker. However, some object employed <u>there</u>. In this thesis, the subject who emplyed <u>there</u> is assumed to have learned the feature [-visible] (See Lyons, 1975).

The following are some of the examples:

(40) (The experimenter hides Mickey Mouse in a bag and puts it behind the subject. The subject's eyes are averted while the experimenter puts the doll in the bag.)

Experimenter: somethin		Now, open your eyes. There is something in the bag. Ask Keiko 'What is this?' or 'What is that?', and she will tell you what I have hidden in the bag.
Subject (Answer type)	:	a. What is that? b. What is there? c. What is it? d. What is this? e. (No answer)

Table 19 shows the percentage of <u>that</u> answers for each of the trials.

Part 5:

The result of the Part 5 test is given in Table 15 on p. 144. There are four types of answers. First, some subjects employed that. Second, some subjects employed it. Third, some subjects employed this making, at the same time, some gestures --pointing, patting and holding the bag (which suggests that they are incorporating the object which is invisible in their individual space). However, the first is considered most natural for referring to the object which is [-visible], whether or not it is in the vicinity of the speaker.

The following are some of the examples:

(41) (The subject's eyes are covered. The experimenter puts Mickey Mouse behind the subject. The subject is told not to peep.)

Experimenter: Don't peep.but just ask Keiko 'What is this?' or 'What is that?'; and Keiko will tell you what is hidden in the bag.

Subject (Answer type) :
a. What is that?
b. What is it?
c. What is this?
d. (No answer)

Table 20 will show the percentage of that answers for each of the trials.

TABLE 11

Part 1

Age	(i)	(ii)	(iii)	(iv)
3; 0	this	•	this	•
3; 3	this	this	•	this
3; 4	•	•	this	•
3; 6	•	•	•	•
3; 7	this	this	this	this
3; 8	•	•	this	this
3; 8	this	this	this	this
3;10	this	•	this	this
3;10	this	this	this	this
3;10	this	this	this	this
3;10	this	this	this	this
3;11	this	this	this	this
3;11	this	this	this	this
4; 0	•	this	this	this
4; 3	this	this	this	this
4; 5	this	•	this	this
4; 5	this	this	•	this
4; 6	this	this	this	this
4; 7	•	this	•	this
4;10	this	•	this	this
4;10	this	this	this	this
4;10	this	this	this	this
4;10	this	this	this	this
4;10	this	this	this	this
4;10	this	this	this	this
Adults				
A	this	this	this	this
B	this	this	this	this
C	this	this	this	this
D	this	this	this	this
E	this	this	this	this

TABLE 12

Part 2

Age	(i)	(ii)	(iii)	(iv)
3; 0	it	it	it	it
3; 3	•	•	•	•
3; 4	it	it	it	it
3; 6	it	it	it	that
3; 7	that	that	that	that
3; 8	that	that	that	that
3; 8	that	that	that	that
3;10	there	that	that	that
3;10	this	this	this	this
3;10	this	this	this	this
3;10	it	it	it	that
3;11	that	that	that	that
3;11	that	that	that	that
4; 0	that	that	that	that
4; 3	that	that	that	that
4; 5	that	that	that	that
4; 5	that	that	that	that
4; 5	that	that	that	that
4; 6	it	that	that	that
4; 7	this	this	this	this
4;10	it	that	that	that
4;10	it	it	it	it
4;10	it	that	that	that
4;10	that	that	that	that
4;10	that	that	that	that
4;10	that	that	that	that
Adults				
A	that	that	that	that
B	that	that	that	that
C	that	that	that	that
D	that	that	that	that
E	that	that	that	that

TABLE 13

Part 3

Age	(i)	(ii)	(iii)	(iv)
3; 0	it	it	it	it
3; 3	•	•	•	•
3; 4	that	that	that	that
3; 6	it	it	it	that
3; 7	that	that	that	that
3; 8	that	that	that	that
3; 8	•	•	•	•
3;10	that	that	that	that
3;10	that	that	that	that
3;10	it	it	it	it
3;10	it	it	it	that
3;11	that	that	that	that
3;11	that	that	that	that
4; 0	that	that	that	that
4; 3	that	that	that	that
4; 5	that	that	that	that
4; 5	that	that	that	that
4; 5	that	that	that	that
4; 6	that	that	that	that
4; 7	it	that	that	that
4;10	it	that	it	it
4;10	that	that	that	that
4;10	that	that	that	that
4;10	that	that	that	that
4;10	that	that	that	that
4;10	that	that	that	that
Adults				
A	that	that	that	that
B	that	that	that	that
C	that	that	that	that
D	that	that	that	that
E	that	that	that	that

TABLE 14

Part 4

Age	(i)	(ii)	(iii)	(iv)
3; 0	it	it	it	it
3; 3	•	•	•	•
3; 4	this	this	this	this
3; 6	it	it	that	that
3; 7	there	there	there	there
3; 8	that	that	that	that
3; 8	•	•	•	•
3;10	that	that	that	that
3;10	that	that	that	that
3;10	this	this	this	this
3;10	it	it	that	that
3;11	that	that	that	that
3;11	that	that	that	that
4; 0	that	that	that	that
4; 3	that	that	that	that
4; 5	that	that	that	that
4; 5	that	that	that	that
4; 5	that	that	that	that
4; 6	that	that	that	that
4; 7	it	it	that	that
4;10	that	that	that	that
4;10	it	it	it	it
4;10	that	that	that	that
4;10	that	that	that	that
4;10	that	that	that	that
4;10	that	that	that	that
Adults				
A	that	that	that	that
B	that	that	that	that
C	that	that	that	that
D	that	that	that	that
E	that	that	that	that

TABLE 15

Part 5

Age	(i)	(ii)	(iii)	(iv)
3; 0	it	it	it	it
3; 3	•	•	•	•
3; 4	it	•	that	that
3; 6	it	it	•	that
3; 7	that	that	that	that
3; 8	this	that	that	that
3; 8	•	•	•	•
3;10	that	that	that	that
3;10	that	that	that	that
3;10	it	it	it	it
3;10	it	that	that	that
3;11	that	that	that	that
3;11	that	that	that	that
4; 0	that	that	that	that
4; 3	that	that	that	that
4; 5	that	that	that	that
4; 5	that	that	that	that
4; 5	that	that	that	that
4; 6	that	that	that	that
4; 7	that	that	that	that
4;10	that	that	that	that
4;10	it	it	it	it
4;10	that	that	that	that
4;10	that	that	that	that
4;10	that	that	that	that
4;10	that	that	that	that
Adults				
A	that	that	that	that
B	that	that	that	that
C	that	that	that	that
D	that	that	that	that
E	that	that	that	that

Table 12

Part 1

Age group / Answer type		ø(*)	it	this	that	there
Group I (3;0-3;11)	(mean age 3;7) n.13	26.3(%)	0	73.7	0	0
Group II (4;0-4;10)	(mean age 4;7) n.13	10.5	0	89.5	0	0
Group III	Adult n.5	0	0	100	0	0

Part 2

Age group / Answer type		ø	it	this	that	there
Group I (3;0-3;11)	(mean age 3;7) n.13	14.3(%)	25.9	14.3	46.5	0
Group II (4;0-4;10)	(mean age 4;7) n.13	0	13.7	7.7	78.8	0
Group III	Adult n.5	0	0	0	100	0

Part 3

Age group / Answer type		ø	it	this	that	there
Group I (3;0-3;11)	(mean age 3;7) n.13	14.3(%)	25.9	0	59.8	0
Group II (4;0-4;10)	(mean age 4;7) n.13	0	7.1	0	92.9	0
Group III	Adult n.5	0	0	0	100	0

Part 4

Age group / Answer type		ø	it	this	that	there
Group I (3;0-3;11)	(mean age 3;7) n=14	14.3(%)	14.3	7.1	57.2	7.1
Group II (4;0-4;10)	(mean age 4;7) n=13	0	8.9	0	91.1	0
Group III	Adult n=5	0	0	0	100	0

Part 5

Age group / Answer type		ø	it	this	that	there
Group I (3;0-3;11)	(mean age 3;7) n=14	17.9(%)	21.4	2.0	58.7	0
Group II (4;0-4;10)	(mean age 4;7) n=13	0	7.2	0	92.8	0
Group III	Adult n=5	0	0	0	100	0

Discussion

Table 11 - 12 show that our hypothesis 1 has been supported. Namely, the results of the experiments show that the acquisition of the IP proceeds gradually.

As Vygotsky (1962) states, semantic development appears to proceed gradually. The fact that a subject does not employ that consistently for every task, but alternatively uses this/it and that even in the same task suggests that the acquisition of that whose features are represented as [+proximal, ±possessive, -visible] proceeds gradually. However, it should be mentioned that the experimentally observed fact might be affected by the methodological problems of the tasks and the children's abilities in terms of their performanee (e.g., short-term memories, attention, etc.) In order to prove a gradual procession in terms of the IP, more deliberate longitudinal and naturalistic observations are required.

As has been considered in the hypothesis 2, the results show that the children acquire the IP in terms of the English demonstratives in an ordered series of key steps: the this/it-that developmental process has been borne out. As predicted, up until about 3;3-3;5, children use it or sometimes this with gestures instead of that

for the object which is invisible although it is in the vicinity of the speaker. It should be noted that there are some children who employ this for the invisible object even over 4 years of age. As can be seen in Tables 16-20, the use of this and it is most noticeable in the first age group (3;0-3;11), mean age=3;7, n=13) While this and it decrease in the second age group (4;0-4;10, mean age=4;7, n=13). There was significant increase in the employment of that for the invisible object as the age of the child increases.

The this/it-that developmental process was consistently found in the four tasks -- Parts 2,3,4, and 5. In Part 2, the number of the correct answers was smaller than those in the other tasks. However, even in Part 2, three-quarters of the 26 subjects used that, thereby satisfying the IP. Therefore, it may be construed that the this/it-that developmental process is found in the four tasks and that there are no results which can be regarded merely as task-specific. Furthermore, the nature of the task does not effect the results. Thus, the validity of the governing feature [+visible]concerning the English demonstratives is confirmed, too.

It is also notable that some children, who could not employ that for the proximal and invisible object, employed it instead, but not this. Most of these same children

employed "What is this?" for the object which was proximal and visible when they were tested in response to either "What is this?" or "What is that?" (See Part 1) This pattern of repsonses was observed through Parts 2-5. Analyzing the data, five or six anxwer patters are found:

Part 2			
	Type 1	ø	3.8 (%)
	Type 2	it	11.5
	Type 3	it-that	15.4
	Type 4	this	7.7
	Type 5	that	61.6
Part 3			
	Type 1	ø	7.7
	Type 2	it	7.7
	Type 3	it-that	11.5
	Type 4	this	o.o
	Type 5	that	73.1
Part 4			
	Type 1	ø	7.7
	Type 2	it	3.8
	Type 3	it-that	11.5
	Type 4	this	7.7
	Type 5	that (including *there*)	69.3
Part 5			
	Type 1	ø	7.7
	Type 2	it	3.8
	Type 3	it-that	11.5
	Type 4	this	0.0
	Type 5	that	62.0
	Type 6	this-that	3.8

The children who employed *this* always made gestures — touching and patting.

It is plausible to assume that the reason why *it*, but not *this*, was employed for the object whose features are represented as (+proximal$_2$, ±possessive, -visible) ([±possessive] means that the feature value of (possessive) is neutral), is because the subjects realize that the visible/invisible conditions concern the use of demonstratives in the adult system, and that they themselves do not know how to make use of this distinction in their own verbal manifestations. If this could be so, this leads us to consider that those children who do employ *it* can be assumed to have partially acquired the IP underlying the use of the English demonstratives *this* and *that*. In other words, it can be assumed that those children who employ *it*, but not *this*, for the proximal and invisible object are in the transitional stage of the total acquisition of this and *that* in terms of the IP.

The result of the confusing usage of *it* and *that* in the experimental tasks may be evidence to support the '*this*/*it* to *that* developmental process' which was formulated from the observational studies.

Children who employed *it* for the proximal and invisible object can be considered to have partially acquired the IP. If this is true, then it is at about 3;3-3;5 when children

first begin to develop their linguistic ability to use this and that contrastively, which shows that the hypothesis 3 is borne out.

Finally, let us look at the results of the tasks with the adults. There were consistently no adults who employed this and it for the invisible objects; all the subjects used that, observing the IP. This result also confirm the assumption that the feature [-visible] governs the use of English demonstratives. It can also be stated that the experimental method chosen in this thesis is adequate to test the IP.

3.2.3 Conclusion

In this section, we studied the acquisition of the Invisible Principle or the IP which was formulated in this thesis as one of the principles underlying the usage of English demonstratives this and that. We discussed the developmental process in terms of the IP from two points of view: one is from the observational point of view, and the other, from the experimental point of view.

In 3.2.1, we investigated the observational data available. The data came from Huxley (1970), Otsu (1971) and the present writer. On the basis of the observational data, we proposed three hypotheses. First, the acquisition of Invisible Principle was supposed to proceed gradually. Secondly, children were considered to go through three key steps in acquiring the IP. That is, it was predicted that the child firstly employs this for the invisible object accompanied by gestures; secondly, the child employs it; and finally that is acquired, even without any pragmatic aid. Thirdly, it was presumed that the transitional age might be 3;3-3;5 when this/it develops to that.

On the basis of these hypotheses, an experiment was conducted in 3.2.2. The subjects were drawn from ASIJ Nursery-Kindergarten, and their ages ranged from 3;0 to 4;10.

The experiment consisted of five parts. In order to examine contrastively, in Part 1, the use of demonstrative for the object whose features were represented as [+proximal , ±possesive , +visible] was tested; in Parts 2-5, the use of demonstrative for the object whose features were represented as [+proximal , ±possessive, -visible] was tested. The method of 'elicited production' was employed in this experiment.

As the result, the hypotheses proposed in 3.2.1 were supported by the experiment, though, as to the first hypothesis, more observational and longitudinal studies seemed to be necessary to verify it. The second hypothesis was experimentally validated; the developmental process of this/it to that was found. Children often employed this with pragmatic aid —touching, pointing and patting. When children employed it and that, on the other hand, few children made gestures but gazing. The third hypothesis was also borne out, though there were found some individual differences. That is, the transitional age seems to be about 3;3-3;5.

On the basis of the data obtained through the experiment, we discussed that the children who employed it might be on the traditional stage in acquiring the

IP. The reason why those children did employ it, but not this, for the object put in the vicinity of the speaker and was invisible, was because those children have noticed potentially that some other form, but not this, was to be employed in the adult system. In other words, those children might have known that the parameter [visible] governed the usage of English demonstratives this and that, although they had no linguistic knowledge that the feature [-visible] was underlying the use of that. This assumption might be verified through Table

In this section, we discussed the acquisition of the IP, which might be one of the principles that govern the usage of English demonstratives this and that in the adult system.

3.3 Summary

In this chapter, we saw how English speaking children acquire the English demonstratives this and that. On the basis of the adult system proposed in Chapter 2, we discussed how and when children acquire the principles underlying the usage of the demonstratives this and that.

First, in the light of the observational data and the previous studies on the acquisition of demonstratives, we suggested that demonstratives originate in gestures employed in the pre-linguistic stage, that they appear sometimes in one-word utterances, and that they are often produced in two-word utterances by many children whose L_1 is English.

Although the early forms of the demonstratives appear at a very early stage of language acquisition, children do not acquire at such an early stage the contrast between distant and proximal, the one between possessive and non-possessive and the one between visible and invisible, and the 'shifting reference-point', which are governed respectively by the Distance Principle, the Possessive Principle, the Invisible principle and the Speaker Principle, and all of these underlie the usage of demonstratives. This paper did not concern the acquisition of the Vector Principle.

It is difficult to determine the acquisitional order

of the principles underlying the usage of demonstratives. On the basis of the works of diarists and linguists, we can say that the DP, the PP, the IP and the SP seem to be acquired in this order. However, it might be necessary to descriminate between the use of demonstratives with progmatic aids and their use with non-progmatic aids. Hence,no attempts will be made in this thesis to propose an acquisitional order of the principles. In order to propose an hypothesis as to the order, further, more detailed, experimental and obsevational study is required. This subject requires more deliberate investigation in terms of the degree to which the progmatic factors concern the acquisition of the DP, the PP, the IP, and the SP. This is an area for future study.

In order to make a steppingstone toward the study of demonstratives, we focused on the acquisition of the IP from two points of view. One is via observational study, and the other is via experimental study.

First, on the basis of the observational data, we proposed and hypothesis, it/this-to-that developmental process. That is, we considered that children use it for the invisible object as the pre-form of that whose features are represented as [+proximal$_2$, +possessive

-visible].

In order to verify the developmental process, we conducted an experiment. The method of the experiment was the 'elicited production.' The subjects were 26 English speaking children, whose ages ranged from 3;0 to 4;10. They were drawn from ASIJ Nursery-Kindergarten. The result supported the hypothesis. That is, the _this/it_ to _that_ developmental process was experimentally validated. The age when the transitional _it_ becomes _that_ seems to be about 3;5-3;6. This age is very young as compared with the one supposed in the previous studies.

CHAPTER 4

CONCLUSION

The purpose of this paper is to study on the adult grammar of demonstratives this and that and to make investigation into the acquisition of demonstratives according to the theory of adult system.

Generally, English demosntratives might be defined as follows: This refers to an object in a pragmarically given area psychologically in the vicinity of the speaker at the coding time or CT ; that refers to the object in a pragmatically given area psychologically in the non-vicinity of the speaker.

Suppose the definition show the basic character of English demonstratives. Then we could isolate from these definitions some general principles that explain the usage of these words. That is, the abstract characterization of general principles that will serve as a guide and framework for the inquiry of English demonstratives will be assumed to be a theory of the abstract properties, which might be realized in various ways.

In this paper, we assume that the subcomponents of the general definition are the following:

(1) (a) Language Internal Principle
(i) Distance Principle
(ii) Possessive Principle
(iii) Invisible Principle
(b) Vector Principle
(c) Speaker Principle

The Distance Principle is concerned with the concept of spatial relationship ——proximity or distance. The Possessive Principle is concerned with the speaker's conception on the possessive territory. The features of [+possessive] and [-possessive] work as the dimension that determines the relation between <u>this</u> and <u>that</u>: [+possessive] means that the object in focus is in the territory of the speaker; [-possessive] means that the object in focus is outside the territory of the speaker. The Invisible Principle concerns the visibility of the object. In the IP, [+ visible] and [-visible] are discriminated. The DP, the PP and the IP are considered to constitute the Language Internal Principle in this thesis. The LIP is assumed to specify the meaning of lexical items <u>this</u> and <u>that</u>. The factors which determine the use of the demonstratives are cognitively and psychologically based and are also realized linguistically. The subsystems of the LIP — the DP, the PP and the IP — are for the most part independent-

ly-motivated principles of interacting theories. On the basis of the subprinciples of the LIP, English demonstratives can be represented in terms of a bundle of features: This is assumed to be composed of the features of [+deictic], [+proximal], [+possessive], [+visible]. On the other hand, that is represented in several different ways such as the following: [+deictic], [-proximal], [+possessive], [+visible] / [+deictic], [-proximal], [-possessive], [+visible] / [+deictic], [-proximal], [-possessive], [-visible] / [+deictic], [-proximal], [+possessive], [-visible] / [+deictic], [+proxiaml], [-possessive], [+visible]/ [+deictic], [+proximal], [+possessive], [-visible] / [+deictic], [+proximal], [-possessive], [-visible] . These possible combinations of features will be summarized in a table such as the following (See Table 21):

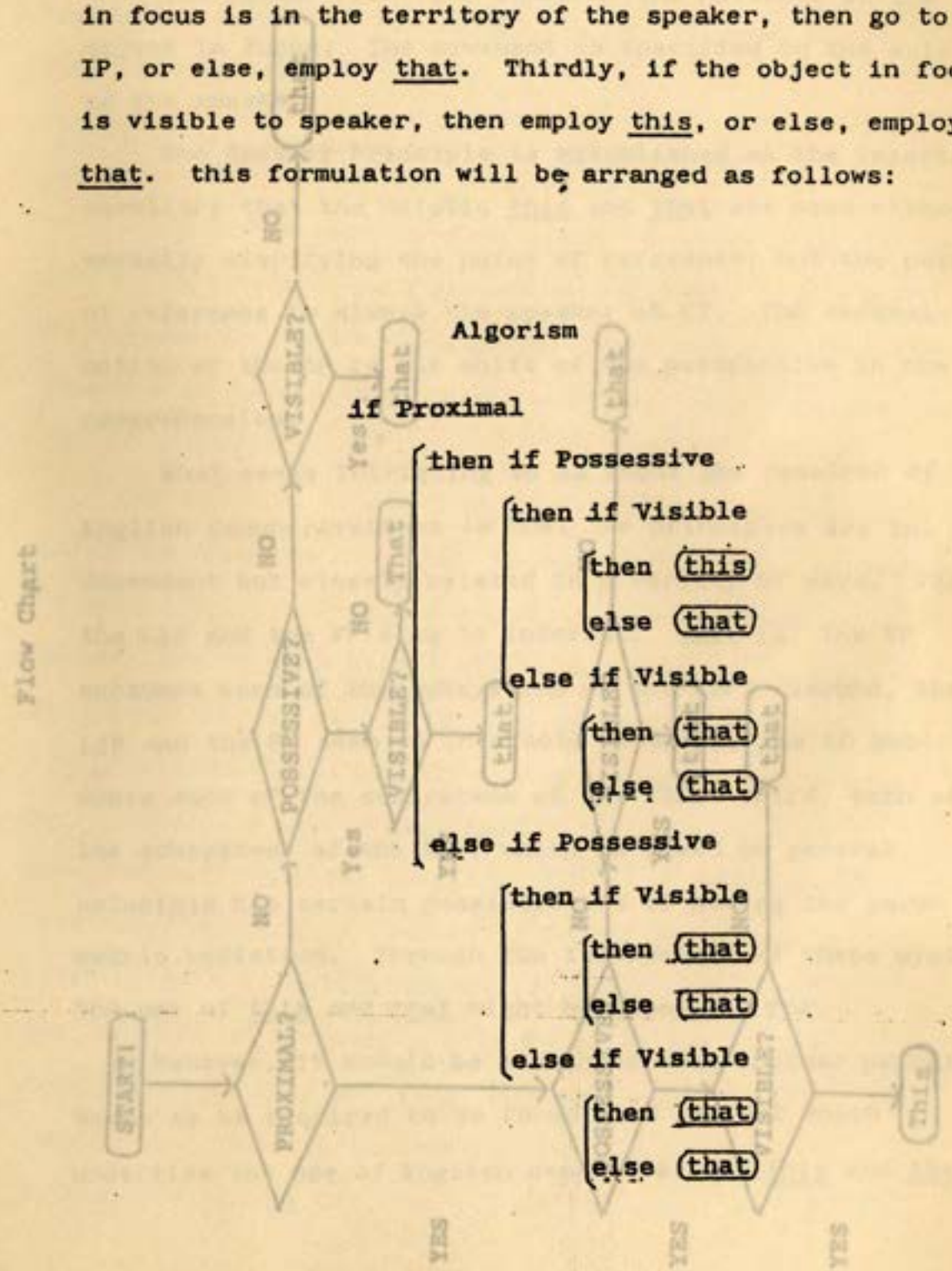
TABLE 21

The DP, the PP and the IP that govern the use of demonstratives this and that will be shown to work following this algorithm: if the object in focus exists outside the physical space but is in the individual space of the speaker,

TABLE 21

	[+Deictic]					
Distance Principle	[+Proximal$_1$]		[+Proximal$_2$]		[-Proximal]	
Invisible Principle / Possessive Principle	[+Visible]	[-Visible]	[+visible]	[-Visible]	[+Visible]	[-Visible]
[+Possessive]	this	this	this	that	that	that
[-Possessive]	this/ (that)	this/ (that)	that	that	that	that

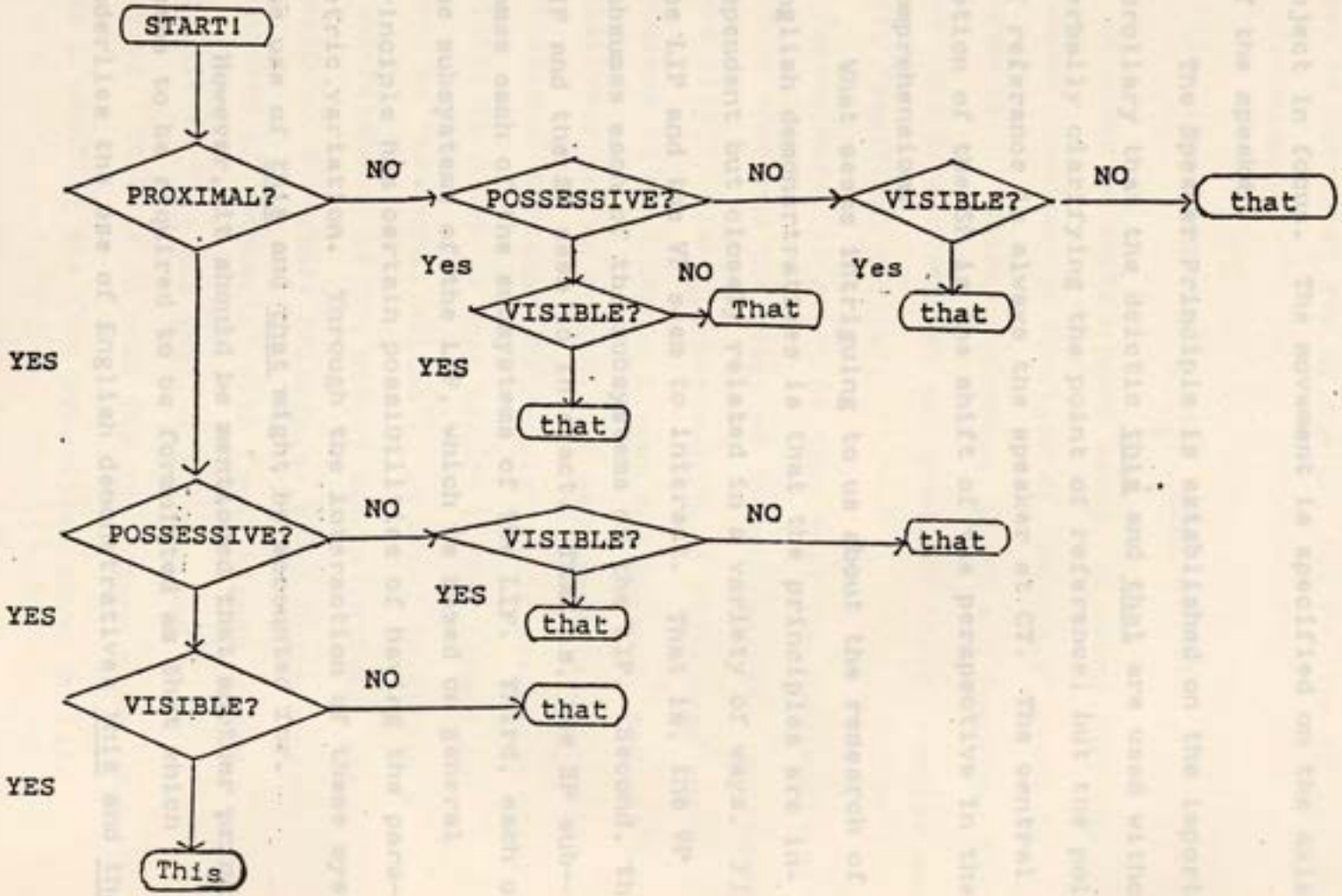
then go to the PP, or else, employ that. Next, if the object in focus is in the territory of the speaker, then go to the IP, or else, employ that. Thirdly, if the object in focus is visible to speaker, then employ this, or else, employ that. this formulation will be arranged as follows:



Algorism

if Proximal
- then if Possessive
  - then if Visible
    - then (this)
    - else (that)
  - else if Visible
    - then (that)
    - else (that)
- else if Possessive
  - then if Visible
    - then (that)
    - else (that)
  - else if Visible
    - then (that)
    - else (that)

Flow Chart


START!
PROXIMAL?
NO
POSSESSIVE?
NO
VISIBLE?
NO
that
Yes
VISIBLE?
NO
That
Yes
that
YES
YES
that
POSSESSIVE?
NO
VISIBLE?
NO
that
YES
that
YES
VISIBLE?
NO
that
YES
This

The Vector Principle concerns the movement of the object in focus. The movement is specified on the axis of the speakdr.

The Speaker Principle is extablished on the important corollary that the deictic this and that are used without verbally clarifying the point of reference; but the point of reference is always the speaker at CT. The central notion of the SP is the shift of the perspective in the comprehension.

What seems intriguing to us about the research of English demonsrtratives is that the principles are independent but closely related in a variety of ways. First, the LIP and the VP seem to interact. That is, the VP subsumes each of the subsystems of the LIP. Second, the LIP and the SP seem to interact. That is, the SP subsumes each of the subsystems of the LIP. Third, each of the subsystems of the LIP, which is based on general principle has certain possibilities of having the parametric variation. Through the interaction of these systems, the use of this and that might be accounted for.

However, it should be mentioned that another principle seems to be required to be formulated as that which underlies the use of English demonstratives this and that.

That is, there seem to be some empirical data which cannot be accounted for by the DP, the PP, the IP and the VP. For example:

(2) (Touching the hotpot) That is hot!

In order to explain such datum, it seems that the principle which concerns the function of 'emphasis' needs to be formulated. Quirk, Greenbaum, Leech and Suartivik (1972) assume that demosntratives are used for their 'emotive use'; Lakoff, 'emotional deixis'.

Furthermore, it might be true that the informational structure concerns the usage of demonstratives. According to Wald (1983), new-this phenomenon is widespread among vernaculars in both United States and England, and yet it is relatively new in origin. If we term this principle "Informational Structure Principle", this principle might be related in a way to what Lakoff (1974) termed and analyzed as 'emotional deixis'. In order to attain a full understanding of the use of demonstratives, the Informational Structure Principle, which might concern the function of 'emphasis' with focal stress on the demonstratives this and that, might be need to be considered. This is an area for the future study, and we stay presenting the five principles shown in (1).

In this thesis, we have argued that the formulation of the principles shown above has made an effective theory, promising to reduce what seems to be apparently irreducible usage of demonstratives to relatively mechanical system. At the present we simply do not know to what extent those principles presented in this thesis are universal -- very little camparative work has been done on this level. But it seems safe to state that the features [+proximal], [+possessve] and [+visible] presented in this paper have a universal basis, although the description in this thesis is culturally skewed. As compared with Japanese system, the DP seems to concern Ko, So and A lines; the PP seems to closely correlate with So-line; the IP seems to work by being dominated by the DP on Ko, So and A-lines. This is the area for the future study.

Just as the problems of usage of demonstratives in adult system can be re-analyzed in a systematic way as shown in Chapter 2, so some of the aspects in children's acquisition of demonstratives may be amenable to this formulation. In this paper, we focussed on the study on the acquisition of the Invisible Prinicple in order to make a steppingstone to the full understanding of the English demonstratives. As the results, we found that children seem to acquire the IP in the third year of age, and they acquire that in a

series of key steps: this/it to that development process was found both via observational and experimental points of view. The children who employed it were regarded as having partially acquired the IP, because they could employ this in the contrastive experiment.

Menyuk (1969) states that the first pronoun to be used productively not as the item-learnt utterances is it, which is in the post-verbal position and with object function, whose reference is generally to the thing of inanimate.(e.g., eat it, which describes a dog eating). Menyuk (Ibid.) also finds that pronominal confusions take place in child language (e.g., hit it, meaning 'hit him'). Huxley (1970) also observes that the use of it and the other pronouns are confusingly produced occasionally by children at 2;3-4;0 of age. It is intriguing that Huxley finds that the use of it and the demonstrative pronouns, particularly that, seems to show a close relationship for those children. She states that "in the early data, demonstrative that precedes a noun or an attribute (with Be missing) is commoner than the unstressed it as subject" (Ibid.: 153). These investigation might also support the assumption of 'this/it to that developmental process' in the acquisition of the IP.

It is noteworthy that when the experimenter asked to the four children whose ages ranged from 3;6 to 4;8, "As I am Japanese, I don't know how to use this and that. So please teach me how to use this and that, OK? You use 'What's this?' when something is near to you. (Putting a doll in front of the child.) Is that right? Then, what do you say when the doll is put behind you? (Putting the doll behind the child's back.) Will you tell me what to say?", the four children answered as follows:

Virginia	(3;6)	:	What's <u>that</u>?
Nicolus	(3;8)	:	What's <u>that</u>?
Gen	(4;6)	:	What's <u>that</u>?
Nicola	(4;8)	:	What's <u>that</u>?

Since the four children answered with the proper form of demonstrative, the experimenter asked, "Why did you say 'What's that?' You said 'What this?' when the doll was put in front of you. (Putting the doll in front of the child once again.)" To this question, the four children answered in the following way:

Virginia : Because I want to know what it is.
Nicolus : I don't know.
Gen : Because we say so. when the doll is behind...(Pointing to his own back)... that!
What is that?
Nicola : Because Mother told me to say so.

In this situation, the object was in the physical space of the subject. Nevertheless, they could employ that, which is the correct form of English demonstratives. They admitted that if the object in focus is in the vicinity of the speaker and is visible, this is employed. However, if the object is invisible, and is in the vicinity of the speaker, they used that.

This fact might be evidence to suggest that English speaking children (3;6-4;8) employ that for the object whose features are [+proximal] [±possessive] and [-visible]. In particular, the utterances of Gen (4;5) suggest that he intentionally discriminates between the use of this and that by virtue of the IP. Although those children could not explain why they employed that in the indicated case, they identified the object in focus by the use of demonstrative that. This fact might suggest that there exists the linguistic innate mechanism of human beings.

In the present state of our knowledge, remarks of this sort could only be suggestive of the many, largely unexplored ways in which the systems of the English demonstratives are studied. It is desired that this thesis will contribute to the investigation of the adult grammar and children's acquisition of English demonstratives this and that, which, we believe, is an important part towards attaining a full understanding of English grammar.

BIBLIOGRAPHY

Atkinson, M. 1982. Explanations in the study of child language development. Cambridge: Cambridge University Press.

Bates, E. 1976. Language and context. New York: Academic Press.

Berlin, B. 1972. "Speculations on the growth of ethnobotanical nomenclature." Language in Society 1, 51-86.

Bloom, L. 1970. Language development: form and function in function in emerging grammar. Canbridge: The M.I.T. Press.

Bruner, J. 1975. "The ontogenesis of speech acts." Journal of Child Language 2, 1-19.

Chomsky, N. 1972. Language and mind. New York: Harcourt Brace Jovanovich, Inc.

_____. 1982. Lectures on government and binding. Dordrecht: Foris Publications.

Clark, E. V. 1971. "On the acquisition of the meaning of 'before' and 'after'." Journal of Verbal Learning and Verbal Behavior 19, 266-75.

_____. 1972. "On the child's acquisition of an antonym in two semantic fields." Journal of Verbal Learning and Verbal Behavior.10, 266-75.

_____ and Sengul, C. J. 1978. "Strategies in the acquisition of deixis." Journal of Child Language 5. 457-75.

Clark, H. H. 1973. "Space, time, semanticsland the child." In T. Moore (ed.), Cognitive development and the acquisition of language. New York: Academic Press.

_____ and Clark.E. V. 1977. Psychology and language. New York: Harcourt Brace Jovanovich, Inc.

Crruttenden, A. 1979. Language in infancy and childhood. New York: Harcourt Brace Jovanovich, Inc.

De Villiers, J. G. and de Villiers, P, A. 1974. "On this, that and other; nonegocentrism in very young children." Journal of Experimental Psychology 18, 438-73.

_____. 1978. Language acquisition. Cambridge: Harvard University Press.

Fillmore, C. J. 1975. Santa Cruz lectures on deixis. Bloomington: Indiana University Linguistic Club.

_____. 1982. "Towards a descriptive framework for spatial deixis." In R. J. Jarvella and W. Klein (eds). Speech, place and action. London: John Wiley & Sons Ltd.

Ferguson, C. A. 1973. Studies of child language development. New York: Holt, Rinehart and Winston, Inc.

French, P. and Malcure, M.. 1981. Adult-child conversation. London: Croom Helm Ltd.

Garvery, D. .1984. Children's talk. Cambridge: Harvard University Press.

Hatano, E. 1983. "Yubisashi kodo no hattatsu-teki igi (A study on the pointing behavior)." Kyoiku-shinrigaku 31-3. 245-55,

Heltveit, T. 1953. Studies in English demonstrative pronouns: a contribution to the history of English morphology. Oslo: Imoversotetsforlaget.

Hewson, J. 1972. Articles and Nouns in English. The Hague: Mouton.

Hörman, H. 1981. To mean-to understand; problems of psychological semantics. Berlin: Springer Verlag.

Howe, C. 1981. Acquiring language in a conversational context. London: Academic Press.

Huxley, R. 1970, "The development of the correct use of subject personal pronouns in two children." In B. D'Arcais & W. Leveit (eds.), Advances in psycholinguistics. New York: American Elsevier Publishihg Co.

Ingram, D. 1979. "Stages in the developments of one-word utterances: transition to semantic relations." In French, P. (ed.), The development of meaning. Tokyo: Bunkahyoron shuppan. 28-40.

Ito, K. "Yoji-gengogaku no doko (The recent studies of the children's language acquisition)." Gengo 11, 52-60.

Jammar, M. 1954. Concept of space. Cambridge: Harvard University Press.

Kubota M. 1972. "Gengoninshiki no kyoyu (on the cognition of language)." In Ninshiki no keisei (The formulation of cognition). Tokyo: Shogakukan.

Lakoff, R. 1974. "Remarks of 'this' and 'that'." In C. Fillmore. B. Lakoff & R. Lakoff (eds.), Berkeley studies in syntax and semantics, I. Berkeley: Department of Linguistics,

Levinson, S. 1983. Pragmatics. Cambridge: Cambridge University Press.

Lyons, J. 1975. "Deixis as the source of reference." E. L. Keenan (ed.), Formal semantics of natural language. Cambridge: Cambridge university Press.

_____. 1977b. Semantics (vol.2.). Cambridge: Cambridge University press.

Menyuk, P. 1969. Sentences children use. New York: The M.I.T. Press.

Miller, G. A. 1982. "Some problems in the theory of demonstraitve reference." In R. J. Jarvella and W. klein (eds.), Speech, place and action. London: John Wiley & Sons Ltd.

_____ and Johnson-Laird, P. N. 1976. Language and Perception. Cambridge: The Belknap Press of Harvard university Press.

Miller, M. 1979. Zur logik der frühkindlichen sprachentwicklung. Berlin: Springerverlag. English Translation bu King, R. T. The logic of language development in early childhood.

Moles, A. and Rohmer, E. 1978. Psychologie de l'space. Paris: Casterman. Japanese Translation by J. watanabe. Kukan no shinrigaku. Tokyo: Hosei University Press.

Murata; K. 1967. Yoji no gengo-shutoku.(Children's language acquisition). Tokyo: Baifudo.

Myers, T. 1979. The development of conversation and discourse. Edinburgh: the Edinburgh University Press.

Nelson, R. 1973. "Syntax acquisitions: impact of experimental variation in adult verbal interaction with the child." Child Development 44, 497-504.

Ochs, E. and Schieffelin, B. 1979. Developmental pragmatics. New York: Academic Press.

Okubo, A. 1968. Yojigengo no hattatsu (Development of child language). Tokyo: Tokyo-do.

Otsu, Y. 1972. "The Acquisition of Syntax." Tokyo University of Education. Senior Thesis.

Parret, H. 1980. "Demonstratives and the I-sayer." In Auwera, J. V. (ed.), The Semantics of determiners. Croom: University Park Press. 96-111.

Piaget, J. 1923. Le langage et la pensee chez l'enfant. Neuchatel and Paris: Delachauze et Nestie.

_____. 1950. La construction du réel chez l'enfant. Delachaux & Niestle, ed., 1939.

_____ and Inhelder, B. 1967. The child's conception of space. London: Routledge & Regan Paul. 1st ed. 1948.

Quirk, R. and Greenbaum S. 1973. A Universal grammar of English. England: Longman House.

Quirk, Greenbaum, Leech and Suartvik. 1972. A grammar of contemporary English. England: Oxford University Press.

Rees, N. 1984. "Aspects of deixis in the language of children with autism and related childhood psychoses." In L. L. Raphel, C. B. Raphel, and M. R. Valdovion (eds.), Language and cognition: essays in honor of Arthur J. Bronstein. New York: Plenum.

Romaine, S. 1984. The language of children and adlescents. Oxford: Basil Blackwell Publisher, Ltd.

Slobin, D. I. 1970. "Universals of grammatical development in children." In G. B. Flore d'Arcais and W. J. M. Levelt (eds.), Advances in Psycholinguistics. Amsterdam: North-Holland Publishing Company. 175-86.

Tanz, C. 1980. Studies in the acquisition of deictic terms. Cambridge: Cambridge University Press.

Tfouni, L. V. and Klatzky, R. L. 1981. "A discourse analysis of deixis; pragmatic, cognitive and semantic factors in the comprehension of 'this', 'that', 'here' and 'there'." Journal of Child Language 10, 123-32.

Thomson, A. and Martinet, A. 1983. A practical English Grammar. (3rd. ed.) England; Oxford University Press.

Tough, J. 1982. "Children's use of language." In B. Wade (ed.), Language Perspectives. London: Helnemann Educational Books. 50-62.

Urban , W. 1939. Language and Reality: the philosophy of language and the principle of symbolism. London: Allen and Unwin.

Vygotsky, L. S. 1962. Thought and language. English Translation by E. Hanfmann and G. Vaken. Cambridge:; The M.I.T. Press.

Wald, B. 1983. "Referents and topic within and across discourse units: Observations from current vernacu vernacular English." In Andrew, F. (ed.), Discourse perspectives on syntax. Cambridge: Acade Academic Press.

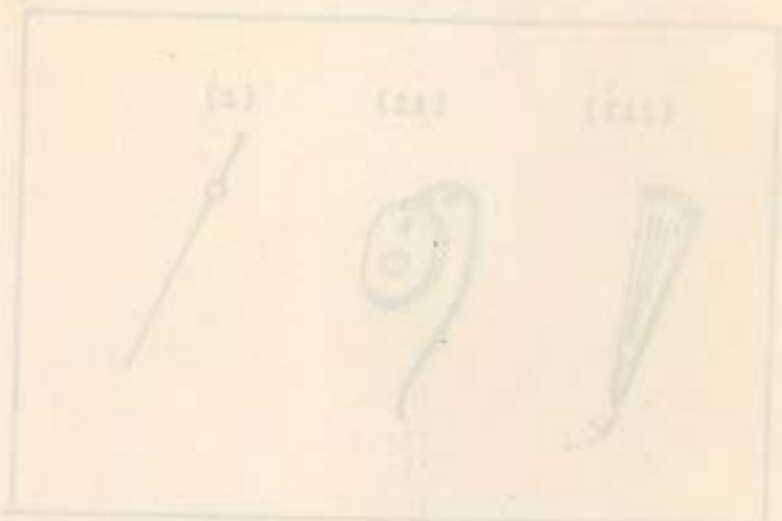
Wales, R. 1979, "Deixis." In P. Fletcher and M. Garman (eds.), Language Acquisition. Cambridge: Cambridge University Press.

_____. 1984. "Children's deictic reference: the role of space and animacy." In S. A. Kuczay, II (ed.), Discourse development: progress in cognitive development research.

Webb, P. A. and Abramson, A. 1976. Stages of egocentricism in children's use of 'this' and 'that': a different point of view. Journal of Child Language 3, 349-67.

Zandvoort, R. 1967, A handbook of English grammar. London. Longmans.

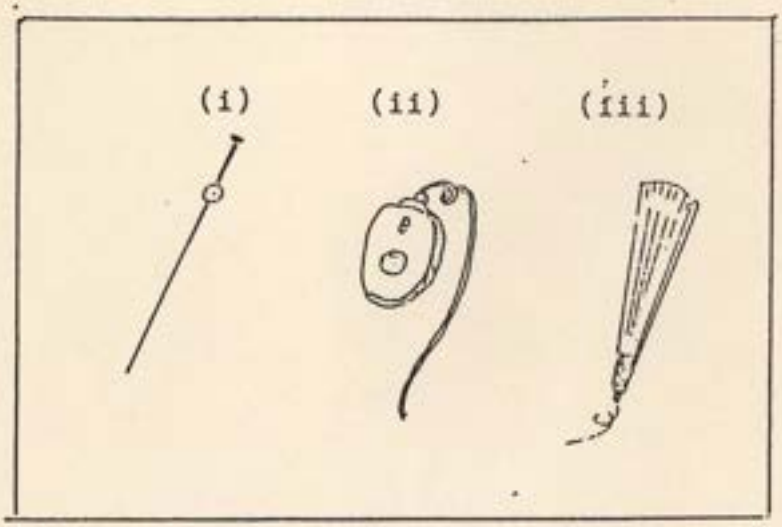
APPENDIX



Part 1

Materials.

(i) Japanese Ornamental Hairpin

(ii) Burglar Alarm

(iii) Japanese fan