

ACQUISITION OF ENGLISH INTERJECTIONS *OUCH*, *YUCK*, AND *OOPS* IN EARLY CHILDHOOD

YOSHITERU ASANO

Interjections in a language must be learned. This paper discusses acquisition of three English interjections *ouch*, *yuck*, and *oops* used by children of as young as 1;7 and by adult caretakers (for comparison). The data analyzed here were taken from three previously-collected data sets which are available in the CHILDES database. The results imply that children may acquire those interjections early but they start using them at different ages due to phonological constraints, and indicate that uses of these interjections may be different between children and adults.*

1. INTRODUCTION. It is natural for a person to show his or her emotions to the world, and the most direct, most widespread, and possibly most effective way of showing one's emotion is to use gestures and facial expressions -- so-called 'body language'. However, it is also possible to communicate emotions using vocalization. In fact, the vocalization of emotion has been often speculated as an origin of human language (jocularly called a 'pooh-pooh' theory). In present-day languages, INTERJECTIONS and EXCLAMATIONS are used to communicate emotions lexically.

Interjections 'are another word class found in all languages' (Ameka 1992:101). Although they are universal in human languages, they are often neglected by linguists. Their peripherality stems from the characteristics they have in a language. Interjections are PARALINGUISTIC, i.e. on the boundary between verbal and nonverbal communication. They are regarded as 'an accompaniment to language or communication rather than being a form of linguistic or verbal communication themselves' (Ameka 1992:112). Also, they are often found to have sounds that are not phonemic in the language in which they are used. For example, the English interjection *whew* may be pronounced [øju:] and this initial consonant is not a phoneme of English. Finally, the interjections do not enter a syntactic relation (Quirk et al 1985) or are 'syntactically independent' (Ameka 1992:102).

Interjections are an important part of a linguistic system and even a child as young as 1;2¹ can use some of them with an adult-like pronunciation in an appropriate situation. At this time, I would like to emphasize the point that interjections are language-specific and acquired through learning, i.e., they are not automatic. Then, how do they learn these linguistically peripheral categories in their early childhood? The present study attempts to answer such a question by analyzing existing data from a computerized database.

1.1. DEFINITION OF INTERJECTION. Although interjections are peripheral, linguists are aware of them. One linguist defines an interjection as:

A term used in the traditional classification of parts of speech, referring to a class of words which are unproductive, do not enter into syntactic relationships with other classes, and whose function is purely emotive, e.g., *Yuk! Strewth! Blast! Tut tut!* There is an unclear boundary between these items and other types of exclamation, where some referential meaning may be involved and where there may be more than one word, e.g., *Excellent! Lucky devil! Cheers! Well well! ...* (Crystal 1991:180).

* The original version of this paper was written in December 1994 for the course 'Language Acquisition' taught by Dr. Lise Menn.

¹ I observed such a child through a videotape in a child language acquisition class.

However, this definition is by no means comprehensive because it dismisses some important aspects of interjection, such as phonemic anomalies of the kind mentioned in §1.

Ameka 1992 subcategorizes interjections into PRIMARY and SECONDARY ones. Primary interjections a) have no addressee, b) have 'no component about the social convention and predictability of the form found in the definition [of *wow!*]' (110), c) are mental acts referring to 'mental states and the dispositions of the speaker' (110), and d) have culture-specific meanings. On the other hand, secondary interjections are 'those words which have an independent semantic value but which can be used conventionally as utterances by themselves to express a mental attitude or state' (Ameka 1992:111). Examples of secondary interjection include alarm calls and attention getters (*Help!*, *Fire!*), swear words and taboos (*damn!*, *hell!*, *Christ!*), and other emotive words (*Shame!*, *Drats!*). Hereinafter, I will use Ameka's primary interjection as INTERJECTION with supplementary definitions given as required.

1.2. PREVIOUS STUDIES. There are few studies which exclusively deal with the acquisition of interjections. One of the studies is on the acquisition of feedback morphemes (also called 'back-channel'; e.g., *yes*, *no*, *mhm* etc.) in Scandinavian languages (Danish and Swedish) by Plunkett and Strömquist (1992). However, their object of investigation, the feedback morphemes, is richer in communicative function than interjections are, which may be why they did not use the term interjection in their article. Yairi (1981, 1982) has yet another perspective -- interjection as a type of disfluency, listed with other speech phenomena such as repetition of words and syllables, and disrhythmic phonation. His studies claimed that two-year-old children used 'interjections' but he did not mention which one(s). He implied that use of interjections is a form of hesitancy, so he might have looked at the interjections *oh* and *ah*. Yairi's longitudinal study (1982) indicated a developmental aspect to interjection use, i.e., frequency of use declined noticeably as children grow (between late three-year-old and late four-year-old), although individual differences prevailed.

There are studies in which use of interjections is mentioned as only one part of the study. Bloom 1973 did a longitudinal study of children in the one-word stage in the acquisition of English. In her data, *uh oh* appeared several times and was first used at an average of 14 months old. She explains the use as follows:

"There" and "uh oh" functioned to point out objects or people that were noticed or found (with or without gesture). "Uh oh" often commented on events that were, more often than not, sudden or somewhat startling (Bloom 1973:87).

However, her analysis on this interjection stopped here.

Finally, Gopnik 1982 studied utterances of children in the one-word stage (between one and two year old) for the children's intelligent actions and mentioned that the phrase *oh dear* was used by some subjects when the toy tower fell or the puzzle pieces did not fit. This usage of *oh dear* led Gopnik to speculate that it indicates 'the relationship between an action and its aim. They encoded the fact that an action ... did not lead to its intended consequence' (Gopnik 1985:308). Again, her main point is not directly related to interjections in general and her article mentions the incident in passing.

1.3. PURPOSE OF THE PRESENT STUDY. As research trend lacks an exclusive study on acquisition of interjection, the present study aims at answering the following questions:

i) When do other interjections than those already studied appear in children's speech?

Bloom 1973 had the first use of *uh oh* at around 1;2. I observed the same in a videotape shown in the class. In the present study, other interjections are selected to see if there is any difference in the time of their first appearance in their speech.

ii) In what situation do children use interjections?

It is assumed that children would use the basic meaning of those interjections when they learn them. However, is there any difference in use compared with the use by adults? If so, does the difference due to their cognitive capacity?

iii) Does the use of interjections show any developmental change in meaning?

Yairi 1982 pointed out a quantitative change of the use (i.e., frequency declines as children become older). However, he did not mention anything about a qualitative change. In the present study, I try to find out if children use interjections in an appropriate way (i.e. in an adult-like way) from their first use.

In order to answer these questions, I chose three interjections, *ouch*, *yuck* (or *yuk*), and *oops* based on the criteria in the next section.

2. CRITERIA FOR SELECTION AND BRIEF DESCRIPTION OF THE INTERJECTIONS FOR ANALYSIS.

First of all, I chose those which I felt particularly English-specific. By this, I excluded somewhat universal interjections such as *oh* and *ah*, which consist of vowels only. Then, I excluded those which are related to religion -- e.g. *god*, *gosh*, and *hell*. This is because I assume those are not taught by adults and if children happen to learn these, adults would discourage their use.² As the next criterion, I chose onomatopoeic interjections. By this, I mean that I avoided those which are also a word (or words) belonging to another grammatical category. Thus, those phrases such as *oh dear* and *thank you* were excluded. Finally, I selected phonetically shorter and more normal (i.e. normal in terms of English phonological system) ones. By this, I excluded those like *pst* ([pst]), *tut tut* (dental or alveolar clicks), and *ugh* ([ʌɣ]). As a result of these criteria, the interjections I selected were: *ouch*, *yuck*, and *oops* (variants will be described later).

According to Ameka 1992, there are three types of interjections: EXPRESSIVE (conveying the speaker's sensory, emotional, or mental state), CONATIVE (with emphasis on the speaker's wishes), and PHATIC (with establishment and maintenance of contact with others). In the present study, all interjections chosen belong to expressive. I assume that this type is most primitive, as Ameka relates this type to "the vocal gestures which are symptoms of the speaker's mental state" (Ameka 1992:113), so it should be learned by children in their early childhood.

In the following, I will describe each interjection in brief with some prediction in acquisition timing and usage.

1) *ouch*: Indicates sudden pain. I conjecture that this should be uttered at situations directly related to the child's own sensation and therefore, it should be learned early. However, it is conceivable that this may be acquired late because of the phoneme /tʃ/, which is generally acquired late. As the data analyzed in the present study did not have sufficient phonetic information on the utterances, I assumed that all occurrences of this interjection should have the affricate. In adult's language, the first written record of this interjection appears as early as 1838 and etymology shows that this came from *autsch* in German (Simpson and Weiner 1985).

2) *yuck/yuk*: Indicates disgusting taste. Wierzbicka 1992 analyzes semantics of physical prototypical *yuk* as:

yuk ("pharyngeal repugnance")

I feel like someone who thinks:

I don't like this to be in my throat

I want it to go out of my throat (Wierzbicka 1992:177)

According to her explanation, it seems that it does not involve any taste. She also points out that range of its use is spreading and it can be used to express non-physical disgust such as students' use of it for an assignment which they strongly dislike (Wierzbicka 1992). This should

² However, adults use them when talking to each other in front of children and it is possible that children may pick those up.

be uttered while experiencing the direct sensation in a manner similar to *ouch*. However, because *yuck* involves a sensory and cognitive response more than a reflexive sensation of pain, I hypothesize that it is acquired later than *ouch*. Moreover, since a taste may be culturally determined, the acquisition of *yuck* may be late. A variant *yucky* is also included but is not considered an interjection if it is clearly used as an adjective (e.g. *it's yucky* or *yucky NOUN*). The first written record of this is rather recent, in 1966 (Simpson and Weiner 1985).

3) *oops*: Indicates 'mild apology, shock or dismay' (Quirk et al 1985:853). This should be acquired latest among the three because its use requires some cognitive capacity to sense the states described by the interjection. However, *oops* may be acquired rather early because of the frequency of its occurrence. If this is an equivalent of Gopnik's *oh dear*, it appears in utterances at an early age (1;0). Variants include *woops*, *whoops*, and *oopss*, which I found in the data source, all considered to be the same as *oops* in the analysis. The first written record for this interjection appeared in 1933 (Simpson and Weiner 1985).

3. DATABASE AND METHOD

3.1. SOURCE AND FORMAT OF DATA. All transcripts used for the present study were taken from the Child Language Data Exchange System (CHILDES) database (MacWhinney and Snow 1985, 1990; MacWhinney 1991). The transcripts were in CHAT format. For details of this format and the program, see MacWhinney 1991.

3.2. CHARACTERISTICS OF DATA. For the present study, the following three sets of data were taken from the CHILDES database.³ These sets were chosen because a) the subjects (children) were learning American English, and b) they contained at least one example of the interjections selected for the present study.

1) Suppes (Suppes 1973)

This set of data was originally from Suppes' longitudinal study on a child named Nina. Nina's speech was collected from 1;11 to 3;3 in one- to 13-day intervals. There are 52 files⁴ in this set.

2) Higginson (Higginson 1985)

This set of data was originally from Higginson's cross-sectional study on processes used by children to establish a lexicon. Three female children (April, May, and June) aged between 0;11 and 2;11 participated in naturalistic sessions of mother-child interaction. There are 21 files in this data set.

3) Gleason (Menn and Gleason 1986)

This set of data was originally from Gleason's cross-sectional study on the acquisition of communicative competence. Twenty-four children (12 boys and 12 girls) aged 2;1 to 5;2 participated in 30-minute laboratory sessions in which the children interacted with their mother and with their father. The naturalistic setting of dinner with the children and the parents was also included. There are 67 files in this set.

3.3. METHOD. In each data set, files containing the desired interjections were identified by a search command. Then, those lines with such interjections on children's tier ('*CHI' or three letters of children's first name) and five lines before the occurrence of the interjections as well as two lines after their occurrence were extracted by the CLAN program.⁵ There were 120 sets of lines

³ All information is from an electronically-available revised version of MacWhinney 1991.

⁴ A "file" is a set of data into which the previous researchers divide their data. Thus, the contents should reflect the difference in characteristics of the research. However, for the sake of simplicity, I will treat all the files from different researcher's data sets as equal.

⁵ Later I checked the original files to determine the overall context. It turned out that I needed more than just eight lines.

extracted and 107 sets analyzed for the situations and possible meaning of the interjections. (Thirteen sets containing *yucky* were discarded because the word was used as an adjective; see §2.)

Moreover, in this study, the adults' usage of those interjections in the same databases was also examined. The above method was applied to extract the data. There were 165 adult sets extracted and 161 sets analyzed in the same way as done for children's utterances. (The discarded four sets were also instances of *yucky* used as an adjective.)

4. RESULTS. The basic information in this section is 1) the number of utterances in which the interjections appeared in the selected database, 2) the earliest occurrence of the interjections in each database, and 3) a possible course of development in usage and meaning of the interjections as interpreted by me.⁶

4.1. OUCH. The number of utterances which appeared in the three databases is 28 for children and six for adults. Five of the children's utterances and two of the adults' were not analyzed because their meaning could not be interpreted. The earliest occurrence among all the extracted data for children is 2;9.26 in Suppes; 3;2.21 in Gleason; and 2;1 in Higginson (only one utterance).

First of all, the basic usage, i.e. expression of the child's own pain, occurred at 2;1 as follows:

(1) (Child sits at the table again; she hit something.)

Child: ouch.

Mother: what?

Child: owie.

Most of the adults' usage directed to children belongs to this usage (three out of four analyzed).

Then, the use of the interjection was extended to an expression of the child's own 'imaginary' pain at 2;10 as in 2.

(2) (Mother pretends to make a toy snake bite the child's belly button.)

Mother: he's going to bite your belly button.

Child: ouch.

There was an instance of this usage by an adult as in 2a.

(2)a (Child (2;10.21) and mother are talking about animals in aquarium.)

Child: he's gonna snap your head off.

Mother: who is?

Child: the alligator is.

Mother: ouch.

Mother: that's not very nice.

This usage was further extended to an expression of other person's (or object's) pain at around the same time as in 3.

(3) (Child puts a toy snake on a doll.)

Child: oh he's going to bite that girl.

Child: ouch.

⁶ Since the present study takes its data from computerized database, most of the contexts was not known to me. Hence, my interpretation of interjections may be wrong under such context-scarce data. However, it should be still noted that interjections are 'all produced in reaction to a linguistic or extra-linguistic context, and can only be interpreted relative to the context in which they are produced' (Ameka 1992:108).

Mother: did he bite her?
 Child: yup.

The extended usages co-occur with the basic usage up to 3;2. It is interesting that the extended usages disappeared from the data after 3;2 and the usage was limited to the child's own pain. Also, there were no instances of this kind of usage by an adult.

In terms of the nature of pain, there was one utterance which did not refer to an acute pain, but rather to sudden obnoxious sensory stimulus. Consider the following utterance at 3;2 in 4.

(4) (Child hugs a stuffed dog; its hair gets in the child's mouth.)

Child: ouch.
 Child: hair.
 Mother: what happened?

4.2. YUCK/YUK. The number of utterances that appeared in the three databases is 24 for children and nine for adults, including all instances of *yucky*. However, as mentioned in §3, there were 13 utterances for children and four utterances for adults where *yucky* was regarded as an adjective and were not used. Three more of the children's utterances were not analyzed because I could not interpret their meaning. Therefore, a total of eight utterances for children and five for adults were analyzed. The earliest occurrence among all the extracted data for children is 2;0.10 in Suppes; 3;2.2 in Gleason; and 1;9 in Higginson.

Various usages appeared in the data for this interjection. At 1;9, *yucky* occurred as in the following utterance:

(5) (Child finds a piece of chewed toffee on the floor.)

Child: yucky yucky
 (Mother disposes of the toffee.)
 Mother: oh, thank you. that's yucky.

In this utterance, the child did not eat the toffee but she recognized it as a 'yucky' thing.

At 1;10, it was used in its basic sense, an expression used when a speaker tastes a disgusting food. The following example shows such a usage.

(6) (Child eats an apple; the child bites seeds.)

Child: yuck.
 Mother: it's a good apple.
 Mother: it's not yucky.
 Mother: it's got seeds in it.

Although this usage seems basic, the data from adults had no instances of this.

The basic usage was extended to expressing disgust at non-food objects, such as a sticky toy, at 2;0.

(7) (Child refers to a sticky toy she has.)

Child: sticky lion.
 Mother: that's an ugly toy.
 Other participant: yick.
 Child: yuck yuck.

Finally, the interjection was extended to describe other perceptions than taste at 4;11, as seen in 8.

(8) (Father shows coffee.)

Father: oh look at this coffee.
Child: real.
Father: did you smell it?
Child: yeah I wanna smell.
Child: yuk!

The data show some cases in which this interjection is learned as a word. At 3;0, its use was further extended to expressing disgust at others' (eating) behavior. Consider the following example in 9.

(9) (Child pretends to make a puppet chew on an umbrella.)

Mother: it's a funny thing to eat.
Child: he will like that.
Mother: do you think he'll like that?
Child: yeah.
Child: I will yuck.
Child: this is a yucky umbrella, right?

The line in which the child used the interjection with *I will*, I interpret as 'If I eat it, I will feel yucky'. These two usages were included in the adults' data as in 9a.

(9)a (Child (3;3.21) and mother are talking about a character in the Sesame Street.)

Mother: I thought he liked garbage.
Child: no, he doesn't eat garbage.
Child: he eats mud.
Mother: he eats mud?
Child: yup.
Mother: yucky, yucky.

There was one utterance in which the usage seemed to be metalinguistic. The following utterance at 3;2 may be interpreted as such.

(10) (Child puts syrup in her coffee.)

Mother: in your coffee?
Child: yep.
Mother: yuk.
Child: what's wrong?
Child: yuk.

The last line in 10 can be interpreted as 'What do you mean by *yuk*?' or 'Did you say *yuk*? (I don't think so.)'. This usage can be regarded as metalinguistic because *yuk* seems to be treated as a word which does not denote disgust of the child's own.

4.3. OOPS AND ITS VARIANTS. The number of utterances appeared in the three databases is 68 for children and 150 for adults. Twenty-three of them for children and 25 for adults were not analyzed because I could not interpret their meaning. The earliest occurrence among all the extracted data for children is 2;0.17 in Suppes; 2;5.3 in Gleason; and 1;7 in Higginson.

Overall, this interjection occurred when the child him/herself or something fell, he/she dropped something, or he/she saw some failure of his/her action. In analyzing its usage, I set up six categories of possible use. I introduce those categories approximately in the order of occurrence in development.

The first category is to describe A SITUATION CAUSED BY OWN ACTION. This means that something the child did affected something in the outside world or the child him/herself and was noticed by the child. Consider the following example at 1;7.

(11) (Child slips as she climbs on to her mother's knee.)

Mother: oops.

Child: oops.⁷

(Child sits on her mother's knee.)

Another example is from the data at 2;1.

(12) (Child returns the keys to the mother.)

Child: keys.

(Child drops the key.)

Child: oops.

The second category describes a FAILURE OF INTENDED SITUATION. This is different from the first because the child clearly intended to make a situation happen, but he/she failed to do so and noticed this. The following utterance in 13 was in the data at 1;7.

(13) (Child plays with a 'potatohead'; she holds the mouth to put it in.)

Child: oops.

Mother: oops.

Mother: try putting on his shoe.

These two categories of use appeared as early as 1;7.

The third category describes SITUATION CHANGE NOTICED. This is for a situation where the children saw something not caused by his/her action, but still not what was expected. This occurred as early as 1;9, as in the following utterance.

(14) (Child was trying to put her sock back on; the sock gets inadvertently pulled off.)

Child: woops.

Mother: uhhuh.

(Child puts the sock back on.)

Child: shoe on.

The fourth category describes MISTAKE NOTICED. This is for a situation where the children made a mistake and they noticed it. See the following example at 2;9.

(15) (Child draws something.)

Child: oops, colored on the table.

Mother: oh, better be careful.

⁷ This is an example in which the child may imitate something uttered by another. In the data set, I found this type of pair (a child's *oops* and other variants IMMEDIATELY followed by other's same one) at 1;7 (as seen in 11), 2;0.17, 2;5.3, 2;5.9, 2;9, 2;11.6, and 3;2.21. On the other hand, there are some cases in which a child initiated and another followed as seen in 13. This type was found in utterances at 1;7 (as seen in 13), 2;1, 2;5.3, 4;0.0, and 4;11.2.

This is different from the FAILURE OF THE INTENDED SITUATION because the child DID something instead of FAILING TO DO something. This is also different from 'situation change noticed' because the situation was caused by his/her own action.

The fifth category of use describes a FAILURE OF OTHER'S INTENTION. This usage is related to a situation in which someone else attempted to do something and the child observed it when he/she uttered this interjection. Consider the following example at 3;2.

(16) (Mother attempts to put the money in a saving box [or something].)

Mother: let's put the money in.

Mother: that penny's stuck.

Child: oh.

Mother: I think.

Child: oops.

This is different from the other categories because the child has to know the INTENTION of others, not only the change in the situation.

Finally, the sixth category describes an OBJECT NOTICED. This again describes that the child noticed something. However, this implies neither a failure nor a situation. The child merely noticed the existence of an object, as seen in the following utterance at 3;2.

(17) (Child and her father play with a toy car.)

Father: I want them right here in the trunk.

Child: no.

(Child noticed something.)

Child: oops.

Father: what's up here?

Child: I wanna show you.

There was one utterance that showed an interesting contrast with the second category FAILURE OF INTENDED SITUATION. The example below can be interpreted as the situation in which the child at 3;1.4 SUCCEEDED in attaining the intended situation but still this interjection was used.

(18) (Child and his father are disassembling a toy car.)

Child: this is going to be easy one.

Father: what makes you think so?

Child: oops.

Child: I did it.

Father: yes you did it.

However, this type of utterance appeared only once in the entire data set.

Because I was able to obtain a sufficient number of data sets from both children and adults for this interjection, I was able to calculate the number of utterances which belongs to each category. The following table in 19 shows the results of the calculations.

(19) Cat.	Number of utterances		% (total)		% (analyzed)	
	CHI	ADL	CHI	ADL	CHI	ADL
[1]	13	16	19	11	29	13
[2]	15	19	22	13	33	15
[3]	7	51	10	34	16	41
[4]	5	11	7	7	11	9
[5]	2	23	3	15	4	18
[6]	2	3	3	2	4	2
others	1	2	2	1	2	2
uninterpr.	23	25	34	17		
Total	68	150	99	100	100	100

Notes: 'Cat.' (categories) are as follows:

[1] situation caused by own action

[2] failure of intended situation

[3] situation change noticed

[4] mistake noticed

[5] failure of other's intention

[6] object noticed

CHI = children, ADL = adults

% (analyzed) = percentages when uninterpreted utterances are excluded.

The two groups (children and adults) are different in the distribution of their utterances among categories. The Pearson chi square test showed a significant difference in distribution (chi square = 27.531, $df = 7$, $p < .05$). The column '% (analyzed)' shows that while adults predominantly used category [3] (situation change noticed), children used categories [1] (situation caused by own action) and [2] (failure of intended situation) mostly. Also, there is a difference of use in category [5] (failure of other's intention). These differences will be discussed later in §5.2.

5. DISCUSSION

5.1. ORDER OF ACQUISITION. The earliest of the three interjections discussed in the present study appeared in each database as follows:

(20)	Suppes	Gleason	Higginson
<i>ouch</i>	2;9.26	3;2.21	2;1
<i>yuck/yuk</i>	2;0.10	3;2.2	1;10
<i>oops</i> etc.	2;0.17	2;5.3	1;7

Although Suppes' data is longitudinal and others' are cross-sectional, there is a general trend in the order: *oops* - *yuck/yuk* - *ouch*.⁸ Contrary to the prediction in §2 in that *ouch* and *yuck* may be produced earlier than *oops*, which is based on cognitive development in child (*ouch* being most directly related to stimulus-response type reaction), an interjection with a seemingly most complex basic meaning - failure⁹ - appeared first. Also, this order has nothing to do with the appearance of the first written record, by which I speculated some relations with acquisition.

⁸ I assume that this trend is appropriate because Gleason's data is LESS LONGITUDINAL than Higginson's. (See §3.2.)

⁹ For children, it is already not so complex, as they passed Period 4 of sensori-motor stage A LA PIAGET and 'children begin to experience "success" and "failure" from an affective point of view. Feelings associated with particular actions or activities are preserved (remembered)' (Wadsworth 1989:48).

However, this order may be quite conceivable when viewed from a phonological perspective.¹⁰ Suppose a child has already acquired comprehension of all three interjections by the time the first of the three, *oops*, appears. The problem then lies in production. The consonants in these interjections happen to enter child's production inventory in different times. Both /p/ and /s/ in *oops* are found in early inventory while /j/ in *yuck* and /tʃ/ in *ouch* are found later. Therefore, it can be said that child's pronunciation of *yuck* and *ouch* remains fuzzy until the child's production inventory makes them possible to be recognized as such by the listener.

Plunkett and Strömquist 1992 mentions that their target, the feedback morphemes in Scandinavian languages, has phonetic saliency for the child -- segmental architecture which child can have in his/her production repertoire, characteristic intonation and reduplication patterns -- as well as high frequency of occurrence in spoken language and these factors 'make feedback morphemes easy to access and easy to produce for the language-learning child' (Plunkett and Strömquist 1992:486). The interjections studied here stand out phonetically: they are almost always emphasized in speech, without vowel reduction. Moreover, they stand out syntactically: as mentioned in §1, some linguists include independence from syntactic structure as a characteristic of interjections (Quirk et al 1985; Ameka 1992). Thus, it is possible to hypothesize that child can acquire all interjections fairly early, but cannot use them because of the phonological constraints in production.

Moreover, the frequency in the input language (i.e. child-directed speech) may be a factor. In all the three databases analyzed, *oops* and its variants occurred predominantly, as seen in 21.

(21)	Suppes		Gleason		Higginson		Total	
	CHI	ADL	CHI	ADL	CHI	ADL	CHI	ADL
<i>ouch</i>	16	0	6	4	1	0	23	4
<i>yuck</i>	2	1	2	3	4	1	8	5
<i>oops</i> etc.	7	38	27	61	11	26	45	125

Notes: CHI = children, ADL = adults

These numbers are the utterances interpreted for the analysis.

It is plausible to assume that the more children heard the word, the earlier the word was acquired.

5.2. USES AND THEIR DEVELOPMENTAL CHANGE. It seems that each of the three interjections can be interpreted differently in the course of development. Since the data used in the present study were not obtained experimentally, it is not conclusive to say that the meaning of each interjection can be related to certain stage in development. That is, for instance, although the basic usage of *yuck* to convey a disgusting taste did not appear in the first utterance, that does not mean that child does not acquire such usage by the time of the first utterance. With this constraint in mind, I will describe the meanings and their change as child becomes older.

Ouch started with the basic use of expressing child's own pain. This usage remains throughout the period covered by the data. What is interesting is that this interjection may be 'diamond-shaped' in its range of use. That is, it starts from the basic usage, the range of usage then broadens to the IMAGINARY PAIN of the child or another, and finally according to the results, the range shrinks to the basic one. Thus, in this case, adjustment of extension may occur. The

¹⁰ Here, I consider only FULL (i.e. adult-like, lexicalized) variants of those interjections.

period at which the range starts to broaden coincides with the onset of Piaget's preoperational period. One of the characteristics of the period is that child can have representation in mind. With this representation, the child can create an image of experience or feeling (Wadsworth 1989). The child takes advantage of this newly-acquired ability in his/her use of *ouch*. However, it is not understandable why this extended usage disappeared in the data as the usage is supposed to be natural in adult language.¹¹

Unlike *ouch*, *yuck/yuk* has a broad range of usage from the beginning. The data shows that there are three different usages, including the basic one, by 2;0. First, Wierzbicka's comment on range spreading (see §2) is not observed in the data. That is, all usages imply some kind of physical disgust. However, if the basic usage is assumed to be 'disgusting TASTE of FOOD perceived by SELF', it is possible to postulate the following extension in usage:

(22)	a. 1;9/1;10	b. 2;0	c. 3;0	d. 4;0
	taste	touch	taste	smell
	food	non-food	food	food
	self	self	other's	self

In adult speech, usage c. is quite common, but usage b. is possible; *yuck* (*yuk*) can be used 'when one saw a squashed slug on the footpath' (Wierzbicka 1992:167). Since the present study has only eight (analyzed) utterances from the children, it may be too hasty to make any generalization of its use. However, it is worth pointing out that the extension to usage c. occurs at around the same time as *ouch* broadens its range to include other's pain. Again, this may be related to cognitive development.

In the data for the present study, *oops* and its variants were the most commonly observed interjections in both children's and adults' speech. This may be due to the nature of the database. The data in Gleason's database had parent-child activity constructing or disassembling a toy car. This kind of activity may involve more success or failure of intended action than any other naturalistic interaction of the same participants. About half of the utterances were from the Gleason database (see 21). Moreover, Gleason's data was scarce in comment ('%com'¹² and other tiers) so many of the data were classified as uninterpretable.¹³

Two of the six categories mentioned in §4.3, SITUATION CAUSED BY OWN ACTION and FAILURE OF INTENDED SITUATION appeared as early as 1;7. This is quite appropriate for children's language because at around this age 'their speech is a verbalization of their current thought or activity' (Starkweather 1987:77). Gopnik (1982) explains that *oh dear* can cover the second category because the usage involves INTENTION and FAILURE, but in the case of *oops*, there seems to be more than those. I take these two categories as the basic usages for this interjection because these appeared throughout the data from 1;7 on, and majority of the data for children falls into these two categories (see 19). (For details of these categories, see the discussion below.) The category MISTAKE NOTICED may be a combination of SITUATION CAUSED BY OWN ACTION and FAILURE OF INTENDED SITUATION; thus, it may not constitute a separate category by itself. The category FAILURE OF OTHER'S INTENTION appeared late and this again shows another example of an extension of usages to other's feeling, perception and so forth. However, it is possible to speculate that, in the case of the utterance in 16, repeated below as 23, there is a JOINT PLAN which both the mother and child are attending to:

¹¹ One adult speaker agreed that some people use *ouch* when they see a person being hit by another. This is equivalent of a doll being bitten by a snake in 3.

¹² CHAT format has a line labeled '%com' by which a transcriber gives comments on a particular line preceding or following the '%com' line.

¹³ Due to time constraints, I did not get a chance to see video tapes provided for the Gleason data.

(23) (Mother attempts to put the money in a saving box [or something].)

Mother: let's put the money in.

Mother: that penny's stuck.

Child: oh.

Mother: I think.

Child: oops.

If so, it is possible to regard this as belonging to the FAILURE OF INTENDED SITUATION category.

As for a comparison of uses by children and adults, no obvious differences were found for *ouch* and *yuck/yuk*. This may be because of the small sample size. On the other hand, *oops* and its variants occurred much more frequently in the databases. As mentioned earlier, this may be due to the nature of the activities the participants engaged in. However, a wide range of situations in which this kind of interjection can be used is sure to cause it to appear frequently.

The abovementioned six categories for *oops* had a different distributions between children's and adults' utterances as shown in 19. Children used the interjection more in situations concerning the self (SITUATION CAUSED BY OWN ACTION and FAILURE OF INTENDED SITUATION), while adults used it predominantly in the situations concerning others (SITUATION CHANGE NOTICED and FAILURE OF OTHER'S INTENTION). This difference may be from the fact that adults are CAREGIVERS and they are more attentive to others, the child in the situations intended. One of the frequent situations classified as SITUATION CHANGE NOTICED for adults is one in which a child fell down or slipped off the mother's knee. Consider the following utterance by a mother of a child at 1;7:

(24) (Child is looking around to find the other shoe of a doll.)

Mother: can you find his other shoe?

(Child slips.)

Mother: oops.

(Child stands up with the other shoe and puts it on.)

Child: shoe.

Mother: uhuh.

(Child walks away.)

Another situation for SITUATION CHANGE NOTICED for adults is one in which a child dropped an object in his/her hands. The utterance in 25 below shows such a case:

(25) (Child (1;10) hands the box to her mother.)

Child: there.

Mother: thank you.

(Child drops the box.)

Mother: oops.

(Child picks up the box of crayons.)

When a child is still young, those situations must be seen often because of a child's lack of motor skills. The important point here is that those situations are categorized as SITUATION CAUSED BY OWN ACTION if viewed by the children. Similarly, the category FAILURE OF OTHER'S INTENTION for adults is a mirror image of FAILURE OF INTENDED SITUATION for children. Thus, children's more frequent use of this interjection in the above categories can be explained in terms of the adults' usage.

6. FOR FURTHER STUDY. Before concluding the present study, I would like to discuss briefly the data I used for analysis. First of all, I missed some variants of *ouch* and *oops* in the database. For *ouch*, *ow* ([au]) is possible as an alternative and, since this is phonologically simpler, it may be

acquired earlier than *ouch*. However, I excluded this variation because it is somewhat between a cry of pain and the more conventionalized *ouch*. For *oops*, this interjection has several spelling options even on the main tier and I could not cover every variants. Some researchers did not care whether the interjection *oops* is spelled (or pronounced) *whoops* or *ops* or *ups*. This may be a point worth considering in future use of the CHILDES database. Secondly, it was difficult to obtain sufficient data (utterances) for each interjection, especially *yuck*, which had only eight utterances analyzed in the present study. This may be a problem in selection of the database. If I can elicit utterance with *yuck* by giving children some yucky(-looking) food (e.g. Japanese sea urchin sushi), I may be able to check when they start to use the interjection.

Moreover, I believe that acquisition study of interjections should wait until interjections in general in adult speech are studied to a greater extent. As I pointed out in §1, interjections are traditionally regarded as peripheral to linguistic systems but they are language-specific and analyzable linguistically (see Wierzbicka 1992). However, there is another characteristics of interjections which should be considered, especially when crosslinguistic aspects are discussed. Wierzbicka states:

one would expect that in societies which discourage a spontaneous and uninhibited show of emotions, the use of primary interjections would be more limited than in those where emotions are shown freely and where expressive behavior is valued rather than discouraged (Wierzbicka 1992:190).

With this in mind, it may be a good time for linguists to talk more seriously about this important element existing in all languages.

7. CONCLUSION. The present study had some findings concerning acquisition of interjection. A summary follows:

- 1) Comparison of the order of the age at first utterance for the interjections analyzed here may lead to a speculation that all of them were understood by the end of children's first year but due to the difference in phonetic contents of the interjections, there was a lag IN PRODUCTION.
- 2) Some meanings (uses) of each interjection in child speech seem to be different from those in adults. This is not surprising because, in an earlier study, Gopnik 1985 mentions that children may have different concepts from adults'; 'The children are not simply acquiring the adult meanings' (Gopnik 1985:317). Also, the present study indicated a general trend of extension of usage from the children's own experience to others' experience as reflected onto self (e.g. *ouch* or *yuck*).

REFERENCES

- AMEKA, FELIX. 1992. Interjections: The universal yet neglected part of speech. *Journal of Pragmatics* 18.101-18.
- BLOOM, LOIS. 1973. One word at a time: The use of single word utterances before syntax. The Hague, The Netherlands: Mouton.
- CRYSTAL, DAVID. 1991. A dictionary of linguistics and phonetics, 3rd ed. London, UK: Basil Blackwell.
- GOPNIK, ALISON. 1982. Words and plans: early language and the development of intelligent action. *Journal of Child Language* 9.303-18.
- HIGGINSON, ROY P. 1985. Fixing-assimilation in language acquisition. Unpublished doctoral dissertation, Washington State University.
- MACWHINNEY, BRIAN. 1991. The CHILDES project. Hillsdale, NJ: Lawrence Erlbaum.
- _____, and CATHERINE SNOW. 1985. The child language data exchange system. *Journal of Child Language* 12.271-96.

- _____, and _____. 1990. The Child Language Data Exchange System: an update. *Journal of Child Language* 17.457-72.
- MENN, LISE, and JEAN BERKO GLEASON. 1986. Babytalk as a stereotype and register: Adult reports of children's speech patterns. *The Fergusonian impact*, vol. I, ed. by Joshua A. Fishman, 111-26. Berlin: Mouton de Gruyter.
- PLUNKETT, KIM, and SVEN STRÖMQVIST. 1992. The acquisition of Scandinavian languages. *The crosslinguistic study of language acquisition*, vol. 3, ed. by Dan I. Slobin, 457-556. Hillsdale, NJ: Lawrence Erlbaum.
- QUIRK, RANDOLPH; SYDNEY GREENBAUM; GEOFFREY LEECH; and JAN SVARTVIK. 1985. *A comprehensive grammar of the English language*. New York: Longman.
- SIMPSON, J. A., and E. S. C. WEINER. 1985. *The Oxford English dictionary*, 2nd ed. Oxford, UK: Clarendon Press.
- STARKWEATHER, C. WOODRUFF. 1987. *Fluency and stuttering*. Englewood Cliffs, NJ: Prentice Hall.
- SUPPES, PATRICK. 1973. The semantics of children's language. *American Psychologist* 88.103-14.
- WADSWORTH, BARRY J. 1989. *Piaget's theory of cognitive and affective development*, 4th ed. New York: Longman.
- WIERZBICKA, ANNA. 1992. The semantics of interjection. *Journal of Pragmatics* 18.159-92.
- YAIRI, EHUD. 1981. Disfluencies of normally speaking two-year-old children. *Journal of Speech and Hearing Research* 24.490-5.
- _____. 1982. Longitudinal studies of disfluencies in two-year-old children. *Journal of Speech and Hearing Research* 25.155-60.