Everyone is familiar with contexts in language. We understand that there is hyperbole in introductions but not in mid-career reviews. Yet just how context affects language is not treated in core theories of language. Models for the human capacity for language have focused on the function of description, report, analysis, as if talking about the world, physical description or abstract description were the main use of language. Language is seen as a map of reality, either the reality outside, an abstract reality, or an imaginary reality. In this view, context gets into language mainly by reference. We talk about the context.

A dictionary implies a view of language. A dictionary takes as a definition what is centrally different about the meaning of a word from another. Dictionaries are designed merely to distinguish. But language is not a direct map; multiple meanings, or polysemy, is common in language. Among the common words in the English dictionary get has 72 meanings, and face has 23 meanings as a noun and 12 as verb. Language tolerates both polysemy and homonymy heavily because humans are very context-sensitive, unlike a machine translator, which can be tripped up.

Evidence of context in language

My claim is that context permeates language, that contextual assumptions affect how we understand language, and that contexts of speech have to be better understood to develop realistic theories of language and of language learning. First, let us clarify what we mean by context. Take as an example getting a book from a reserve library counter. We normally remember the setting—the counter—and the activity that occurred—a service request—and we remember that the librarian said the book was checked out. These facts we can report, and we have a focused memory about them. But typically we do not notice, unless they are unusual, the physical layout in detail, who else was present behind the counter or before it, the exact exchange, the librarian’s syntax, accent, language, address terms, verbatim wording, rate of speaking, or the prosody of the speech. These are aspects of context, in the sense that they are present and backgrounded. If they do not survive in our reported memory of the event, how can we say they are important as context? My next examples illustrate our use of backgrounded, non-focal, incidental information.

Context in humor. One evidence that we notice context is that we make humor about mismatches of speaker characteristics and language and of physical setting and language. Many cartoons are based on a clash between the expectations from the picture, which is the context, and the caption. Normally we process the

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1 1994 Faculty Research Lecture, an honorary occasion at the University of California Berkeley
picture rapidly before we read the caption. For example, we see an organist in a
giant cathedral playing the organ. We expect a magnificent piece of music. Then
the caption tells us what he is singing while playing: I love coffee, I love tea, I love
the girls and the girls love me, a two-finger exercise.

We also note discrepancies of style and content in cartoons where
occupations are identified. These are funny because certain kinds of talk fit
particular work in particular settings. In a cartoon, two women in aprons are
cleaning up the debris in a deserted corporate boardroom. One says The tumult
and the shouting cease, the captains and the kings depart. We saw the image of
cleaning women, but we were unprepared for them to quote Kipling. It is not what
we expect them to be talking about while cleaning; in addition we may not even
expect that memorizing Kipling was part of their education. It is both a situational
shock and a social background shock. In other kinds of cartoons, the New Yorker
has judges talking legalese at home to their wives. The following excerpt of stand-

up comedy on a recording is another example of work talk brought home. The
asterisks indicate special emphasis on the following word.

(1) Airline attendant and husband at breakfast

W: *am preparing *beverage, but if you'd *rather go
*without it I'll *certainly hold it *back for you.
H: *No, *look I can't *stand it any more,
do you understand me?
  I can't *bear it, I'm getting *out, I *quit,
  I want a* divorce!
W We-*ell, if you *do *feel that *way about it,
  I'd suggest that you *wait until perhaps *3 PM
  when I *will be back from shopping at the beautiful
  *Saks Fifth Avenue.

Nichols & May, 1959

The clash here is at several levels, between setting and occupational talk
and between content and style. In addition there is a parody, which wouldn't be
funny if we have not been listening to the singsong of stereotypic airline
attendants' talk. The features of this style can be said to index or call to mind
airline attendants as speakers, and airlines as settings, showing us that we have
been noticing backgrounded information about style.

Humor is a good test of what people know. The spontaneity of laughter
shows that audiences notice these features of speech that index setting and
speaker characteristics. The humor in cartoons depends on delicate timing because the caption must catch us just as we have made an inference from the
picture about what the people might be saying or how they would be talking.

Context in address. Let me turn now to research on particular speech
features that are sensitive to context. The first case is naming, which is familiar to
all of us.

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2If you show a cartoon on an overhead projector that distorts the size relation of picture to
text, it can fail to be funny, showing that the relative processing time for picture and text is
crucial to the humor.
(2) Southern white police officer to adult black male in the 1950’s:

O: What’s your name, boy?
P: Dr. Poussaint. I’m a physician.
O: What’s your first name, boy?
P: Alvin.

“As my heart palpitated, I muttered in profound humiliation..... For the moment, my manhood had been ripped from me...No amount of self-love could have salvaged my pride or preserved my integrity. [I felt] self-hate.”


In working on naming, (Ervin-Tripp 1973, p. 305), I showed schematically in a flow chart of choice points how a northerner in my generation arrived at address terms. Generally such an address choice schema starts with child/adult status of the addressee and with the setting (e.g. Your Honor when addressing a judge in court, but not outside the court). This southern policeman was brought up to address adult white males as sir, but the policeman had a selector in his address system for ethnic categorization, which involved calling adult blacks with the first names, as if they were children. These two understood each other perfectly.

**Context in request forms.** Requests involve another speech act where many features of context systematically affect choice, but not in such a direct way. The factors affecting requests can include relative status and familiarity with the addressee, cost or difficulty of the request in terms of the addressee’s current activity, and physical distance. We noticed that physical distance mattered, because in a study of requests in an office, a staff member speaking to a peer nearby might say *Bring me the file,* but to someone further away *Bring me the file, would you, Rose?* (Ervin-Tripp, 1976).

In some quotes taken from a campus medical laboratory (Ervin-Tripp 1976), we see a technician who indexed familiarity when he was alone with a doctor he worked with: *Hey, Len, shoot the chart to me willya?* but he shifted to a style which indexed the doctor’s higher status when outsiders were present: *Shall I take it now, Doctor?* These shifts reveal sensitivity to contextual information.

We found that one of the major determinants of request mitigation, that is moving to a more polite request, was asking for something outside of role, that is extra, beyond normal expectation, as in the example below.

(3) Husband and wife are serving stepfather.

Wife to her husband Ben:

*Bring some out, so that Max could have some too....
Geschmacht. Hmm. Oh it’s delicious!
Ben could you hand me a napkin please?

3There were ‘respect’ variants for older addressees involving kin terms.
Here we see the wife can address direct, unmitigated imperatives to her husband in the co-host role since someone else is beneficiary, but she uses a mitigated request when the beneficiary is herself.

**Understanding intent.** The wife said "Ben could you hand me a napkin?" Why can't Ben just answer "yes" to this question? It is the case that a great many utterances which are treated as requests by listeners could be taken as something else. They look like something else. When I asked a child *Why are you in the garden with your socks on?* I was surprised to hear an explanation rather than to see an exit from the garden or removal of socks, since I heard what I said as a directive. We are surprised when a ten year old to whom we say on the phone *Is your Dad there?* says *Yes* and does nothing about it. Below is an example of another misunderstanding.

(4) A misunderstanding between a foreign student and an elderly landlady.

A: Can we move the trash bin over here?
L: Oh, Anna, I didn’t know you had a roommate!

This problem arose because of two misunderstandings. One was the *we* which is used downward by authorities, as in the teachers' *let’s take our naps now* or the doctor’s *we should check his temperature every couple of hours.* In the context of conventional action, ‘we’ from an authority can mean ‘you’. Anna used ‘we’ to mitigate a directive, but the landlady heard it as a request for permission. What Anna meant was *could you move the trash bin over here?* or even *could you have the trashbin moved over here?*

Permission requests and directives for the hearer to act, like *can I have some juice* often look alike. What prevents these apparent ambiguities from causing trouble is that people take contextual expectations, or action trajectories, and social information into account. That is, there are always two interpretive processes. One is understanding the message about action in the current or future time. The other is understanding the social message about status, emotion, or distance in the context of speaking. In most contexts at least one of these aspects is conventional or obvious, so the other can be calculated. Since the context is known before the message is heard, there is little risk of ambiguity. The backgrounded context is thus what makes the other kind of meaning unambiguously interpretable.

**Marking social relationship.** Naming and requesting appear to be occasions that are not so necessary or unavoidable as to require the indexing of social relationship in every interaction. For instance, we know people who simply avoid naming because they cannot figure out how to position themselves. There are European languages in which reference to a hearer's action or possessions requires choice of familiar or formal, *tu* or *vous*, or *usted* or *leí*, *du* or *sle*. So in awkward situations one does not refer to the addressee in any way. But in Korean and a few other languages, one cannot talk at all without such social indexing since every finite verb requires a marker. Even in a comment that it is raining,
one must indicate relative social status; these forms are used everywhere, even within the family.

(5) **Korean social marking in a church group in the United States**

[Eunsun is a 29 year old woman in charge of music
Gwangsu is a 33 year old male economist, president of the church group
Gwangsu is angry at a suggestion of Eunsun and shouts. ]

1 Bintae: Please state -shi that as a suggestion, and....
2 Gwangsu: No, even after you came to the United States....
3 Chuhee: Let’s control our emotions -ta.
4 Gwangsu: No you are just...The members are expecting only
to be receivers and even now,
does anyone know everyone’s name?
7 That's impossible!
8 Hey, you don’t do things like a GAME.
9 Why should we do that?
10 Eunsun: I’m not talking about doing anything like a GAME-eyyo.
11 Gwangsu No! communication is the **best means of**
fellowship-eyyo.. [stands up]
14 {{in English}00000KAAYYY? COMMUNICATE!
15 COMMUNICATE!
16 [claps hands, stepping towards each member]
17 ONE! AFTER! ANOTHER!}
18 Chuhee: Please calm down-shi-eyo.

In the Korean part of the text there are two types of marking, the verb suffix -shi and the sentence-final markers -ta and -yo, involving (See Table 1) the formality of the situation and the degree of deference to the addressee. The -shi suffix is the informal polite verb marker. Notice that in lines 4 to 9 Gwangsu does not use any status markers at all. Korean speakers hear this segment as very rude indeed. It’s hard to think of what would be comparable, perhaps like shouting "you idiot" at someone. The forms used in the rest of the segment are informal but deferential markers appropriate to speaking about and to people who are not intimates. After it is modeled in 10, Gwangsu uses the appropriate sentence marker in (12). The -ta form in (3) is in the first person so it is not deferential, since it concerns the first person. Note that it is not, therefore, a request as in line 18 or in Text 4 above.

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4For ease of reading, the Korean part of the text is given in lower case English, with the markers of status in boldface. Only the upper case segment 14-17 was actually spoken in English.
Table 1. Korean Speech Levels and Contexts in Sentence-final Markers

<table>
<thead>
<tr>
<th>Speech level</th>
<th>Context</th>
<th>Declarative</th>
<th>Question</th>
<th>Order/Request</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEFERENTIAL</td>
<td>formal</td>
<td>-pnita</td>
<td>-pnika?</td>
<td>-shipshiyo</td>
</tr>
<tr>
<td>(jondaetmal)</td>
<td>informal</td>
<td>-yo</td>
<td>-ngayo?/</td>
<td>-sayo</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-nayo?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-uyo?</td>
<td></td>
</tr>
<tr>
<td>SEMI-DEFERENTIAL</td>
<td>formal</td>
<td>-o</td>
<td>-na?</td>
<td>-gae</td>
</tr>
<tr>
<td></td>
<td>informal</td>
<td>-ne</td>
<td>-nga?</td>
<td>-shio/-so</td>
</tr>
<tr>
<td>NON-DEFERENTIAL</td>
<td>formal</td>
<td>-ne</td>
<td>-ni?</td>
<td>-ae</td>
</tr>
<tr>
<td>(panmal)</td>
<td>informal</td>
<td>-ta</td>
<td>-nya?</td>
<td>-ra</td>
</tr>
</tbody>
</table>

(Seo, 1984).

The important fact about Korean is that you must know the addressee’s relative age and status to be able to talk to anybody, and you keep reminding people of your age and status by the speech markers you use. You can hear new acquaintances spend five minutes learning when each graduated, what their occupation and company is, and if they are women, whether they are married, and whether they have sons. In order to avoid doing this, sometimes bilinguals switch to English (Howell, 1967).

**Code-switching.** Gwangsu shifted to English in 14 to 17. English allows him to approach and direct each person but again it takes him away from the distancing markers normal to Korean and makes his colleagues nervous, if we judge the comment in (18).

Code-switching is the most dramatic way of making a shift in context for interpreting speech. Bilinguals frequently do not recall the language of an interactional event. That is, they treat the language, if it was not unusual, as a background feature, using it in interpretation but not storing it as focal information.

Why is the particular language spoken relevant in interpretive outcomes? We all are aware that languages code the physical world differently. A vivid example is the difference between the Navaho and English color system. We tested English and Navaho monolinguals on a range of hue chips controlled for intensity and brightness, and found two points of major difference (Ervin-Tripp, 1961). The low-brightness mustards were called *hlitso* by almost all the Navahos, who responded quickly, but Anglos were not agreed on naming these hues, only 30% naming them hesitantly a qualified *yellow*, and Anglos call *yellow-green* what is still a good *yellow* for Navahos. The range of hues Anglos call green, blue and purple are all called *doothlizh* by Navahos, albeit often with nuancing qualifiers. In English, Navaho monolinguals still consider *hlitso* to be yellow, since there is no good competitor. Navaho dominant bilinguals had great difficulty in naming

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5Respondents were asked to name colors, so both the hue name and the time of response when shown a Munsell color chip were recorded. In the “best” or prototypic hues, close to all respondents agree on the name, but at the boundary between two hues, only half give a particular color name.
chips in the range of *dootlizh* in English; it is unforgettable to hear a Kelly green called *purple* or a purple called *green*. Bilinguals keep the Navaho boundary for green/yellow in English because the categorization of the yellows is less ambiguous in Navaho than in English, but when English insists on dividing up a single Navaho category, and provides no dominant translation for the Navaho name, the amount of experience with the second language predicts sharpness of the new category boundaries.

In addition to physical world category differences, speakers do not have the same ideas about the social world when they shift language. If you require that a particular language be spoken, you can alter message content. In a pilot study as a graduate student in the early fifties, I showed the same picture to Japanese bilinguals, and instructed them to tell stories at one session in Japanese, and in the other, in English. The Japanese bilinguals in the study were American-born Nisei graduate students who had grown up on the west coast until being relocated during World War II. One Thematic Apperception Test picture showed a woman standing in front of a field where a man was plowing. These are the two stories told by the same speaker, revealing difference in family thematic focus. In a later study, involving direct instruction to use a stereotype (Ervin-Tripp 1967), I was able to show that these story contrasts with language context cannot be simulated easily under instructional set.

(6) **Thematic Apperception Test picture stories by the same speaker.**

(A woman is standing in front of a field, with a farmer plowing)

**Jap:** A student is in conflict about being sent to college because her mother is sick and her father has to work very hard to support the student. The father prays for the student’s success.

**Eng:** A sociology student observes farmers at work and is struck with the difficulties of farm life

IN Japanese, the students tended to talk more about their families, and less about studying. I also asked them to complete sentences, The beginning of the sentence is showed in boldface.

(7) **Sentence completions** by the same speaker on two occasions.

**Jap:** If the work is **too hard for me**, he says "well. this is merely... and as if whipping himself, he works all the harder.

**Eng:** If the work is **too hard for me**, I'll just quit.

**Jap:** I **like to read** about sociology.

**Eng:** I **like to read** comics once in a while because they sort of relax my mind.

**Jap:** **My greatest pleasure** is to graduate from graduate school.

**Eng:** **My greatest pleasure** is to lie on the sands of the beach out West.
This was the same speaker, replying on two different occasions in the two languages. Last year one of my Asian-American students studied what is called the "model minority" fallacy. In the difference between the English and Japanese replies, by speakers a generation or more older than our students, we see the dilemma. In one language they are the model minority, in the other, they don't want to be.

The important point for my purposes today is that language choice, whether spontaneous or required, alludes to values and can background interpretation. So even when bilingual speakers cannot recall the language in a segment of talk, we find they use language as contextual information to interpret meaning.

**Discourse context.** Another context is shared experience or something mentioned earlier in the discourse that sets up expectations for what follows.

(8) **Two brothers in a round of earthquake narratives**

a  Art: you know.. you know that that nice glass china display case in our dining room?
b  Neal: ==in the dining room.
c  Cass: ooooh.
d  Neal: trashed
e  Cass: forget it
f  Neal: absolutely trashed
g  Art: ==whole thing a=bsolutely=
h  Neal: ==every single bit of glass and=
i  Neal: =pottery in th-=
   Art: =. yeah =
k  Olga: ==and crystal?
   Neal: ==all the crystal trashed
   Art: ==crystal
m  Neal: ==everything trashed
n  Cass: oooh my *gaaaawd

UCBDiscLab: QUAKE

Since this story is from a round of stories about the effects of a recent California quake, the previous context sets up preliminary components so the main event does not need to be mentioned.

**Context in acquisition**

Is this sensitivity to the non-verbal and verbal aspects of context simply a result of adult sophistication, or do we have to consider identifying the details of context sensitivity as part of our language learning skill? Context sensitivity was part of our pre-human heritage, and was not relinquished when language developed. A basic condition for language learning is juxtaposition of symbol and

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6In this text, == indicates ‘latching’ or picking up the turn on the beat as if the same speaker were continuing without a pause. = talking= indicates a segment overlapped with another simultaneous passage.
event, so learners have to attend to both text and context. They have to make the link to give meaning to the symbols. So let us turn to language learning issues.

Context for purposes of learning can include:
- the physical and social setting,
- the event or activity that occurs in that setting,
- the understood goals and emotions of participants,
- the local topic,
- any speech that is retained, at least the preceding turn, including of course the code used.

**Evidence of children’s notions of physical context.** From the earliest ages, children notice the background contextual information we have been talking about. They pay attention to the physical context of use first, including the people present, as the history below of learning about *from* illustrates. The children begin with the directional, physical orientation, then later the ‘by means of’ use can be seen.

(9) Examples of *from*

2;2 It came from my book-box.
2;3 It come from in the bathroom.
2;5 It came from my toe. [of sock]
2;11 Look at that knocked down tree from the wind.
3;0 I not tired from my games.

Clark 1993, p. 58

2;5 A: What do they taste like? (play-doh worms)
   C: Taste from right in here. (points in mouth – means they taste bad.)

2;5 A: Where did you get this?
   C: From Daddy.

2.11 M: Because you dropped that rifle on your toe.
   C: Because I dropped my rifle on my toe.
   Because I hurt my toe from my rifle.

3;01 A. Ask Chicken Little how do you drink, Harvey.
   C: I drink from a cup.

Miller-Ervin UC Transcripts

Notice that at first *from* means physical directional source. Clark’s data give consistently *it came from* or *it come from* (compare *it came off*) even when an adult speaker would have a different wording. That is, the first meaning of *from* is a spatial, directional one. Adults often ask where something comes from or came from. The extension to causality is modeled in such adult uses as *He got a bruise from falling down, they’re sticky from cooking, and you’ll get cavities from candy.*

Children notice what is present in the physical context of speech, and learn very early in Korean to simply omit noun arguments of the verb in talking about what is present, to presuppose them (Clancy 1993). Presence in talk as a referent
comes to play the same role as physical presence, by three. That is the age when
English-speaking children have learned to supply pronouns in anaphoric cases
where nouns occurred in recent talk (Ervin-Tripp 1977).

**Speech events as context.** While turns, or response forming, is one of
the earliest kinds of evidence of discourse organization (Ervin-Tripp, 1977), as
soon as they play with one another, children begin to form ideas about speech
events as organized contexts. Even an 18-month-old may report a phone
conversation as *Hi Fine Bye*. So the outlines of speech events are part of the
contexts that children come to identify.

(10) Spanish-speaking 5 year old, 7 months in English on play phone
S: Hello
E. What’s you doin?
S. Fine
E. My mommy told me to go to school.
S. Me too.
E. OK, bye. I’ll call you back tomorrow.
S. OK, bye.

Ervin-Tripp 1981

In the above example we see the bare outlines negotiated successfully by a
second language learner, including the salutation, correct response to the first
move, content acknowledgment, and repetition of farewell.

(11) Spanish-speaking immigrant of 5 with 5 months in English on play phone
S. Hello, come to my house, please.
E. Who are you?
S. Nora
E. Nora, you’ve got to say, ‘what are you doing?’
S. What are you doing?
E. Making cookies. What are you doing?
S. Making cookies, too.
E. Ok, bye.
S. Bye.

Ervin-Tripp 1986

In this case something has to be taught, since the child has moved into the
content without the correct first move after the greeting. The native speaker
makes clear that there is a required first entry after the salutation. In this
example we see that the recognizable speech event, a telephone call, has come to
have normative components. Children can come to recognize the limited set of
appropriate moves at each phase, so each utterance is interpreted according to its
place in the event organization.

Although we have seen that adult request forms can be complicated or
superficially ambiguous, the contrast between requests and non-requests is
evident and important to children. Some children even mark the contrast in their
speech, as some languages do. For instance, Budwig (1989) found that some
children say use a different first person pronoun for the subject in requests than
they do in information statements: *my want that* but *I like that*. *My build tower*
represents a desire, and *I see kitty* represents a report, for such a child.
Even more dramatically, Julie Gerhardt (Gee and Savasir 1986) found that three year olds use the supposed English synonyms *gonna* and *will* very differently. **Will** is the future form for offers, requests, compliance, for agreement, for responding to the other, for questioning desires. **Gonna** is the form for talking about personal goals and intentions (like *I'm gonna be the mommy*), for statements, and for impersonal questions. In short *gonna* is the term for planning, *will* for enacting collaboration with another.

**Interpersonal acts as contexts for syntax.** Children's requests are a privileged context for certain syntactic advances. The first temporal and causal clauses occur in children's requests and negotiations of future plans.

(12) Speaking to doll:
2;3 would you like some juice?
would you like some more juice, after you eat these?

Ervin-Miller transcripts, UC Disclab

(13) Circus figures doll-play:
4;07 M:  {[fortis] can I have him because I *like him!}

Kyratzis, 1993

(14) 4 year old peers. John grabs a clown from Carl:

a clown, guess what I think, cause I have a clown.
so this is mine, I got an exciting show.

Kyratzis, 1992, p. 328

(15) Story retelling of 7 year old girls:
the little *sister *cried, because her brother turned into a *deer.

Kyratzis, 1993

The first causal clauses justify requests. Kyratzis saw many of these in boys' disputes over toys (13, 14). The last example, from a girl's narrative, (15) shows the extension of causal clauses from use to justify, which occur in younger children (Kyratzis et al. (1990), to use for conveying propositional truth relations. Thus grammatical form use is sensitive to the interpersonal functions of language.

Since requests are important to children, and of high frequency, children are sensitive to the form and context variations involved. By four they have learned to mark high cost requests to high status persons and strangers differently. They address more polite requests to their fathers than to their mothers, and to owners or at least possessors of toys (Ervin-Tripp 1982).

The reasons they do this are not clear. Many parents are under the illusion that politeness is learned because it is rewarded. When the likelihood of compliance was high (what we call low-cost requests), politeness actually reduced compliance, according to our data. But the child observes that in cases where compliance is not expected-- like asking for something owned or in use--the most effective directives to younger children are aggravated, and the least effective are polite. Loud, angry commands are effective in compelling obedience from younger siblings. And mitigation is less effective to adults than a simple command or request. In conditions where compliance was unlikely (what we call
high cost cases), adults complied\(^7\) with 42.6% of plain, unmitigated commands or requests, but only 26.8% of polite requests by children (Ervin-Tripp, Guo & Lampert 1990).

The only condition in which there is a payoff for politeness is in talking to older children. Children addressing control acts to peers or older children were successful only 23.8% of the time with neutral direct forms, but 52.6% of the time with polite forms (Ervin-Tripp, Guo, & Lampert 1990). The reason for that is clear. Adults are not interested in getting their status rewarded by children, but children are. Studies in nursery schools also show that subordinate children give more polite requests to dominant children (Wood & Gardner 1980). Status is up for grabs between children so they pay attention even to symbolic rewards such as being spoken to with respect. Sometimes that is their major focus (Mitchell-Kernan & Kernan 1977). But we noticed that adults rewarded by compliance neither aggravation nor mitigation in the speech they receive from children.

**Understanding directives.** If the context of speech is important in establishing how children interpret what is said, what happens when the surface message appears to contradict the context? We did a set of studies in which there were both requests and prohibition events. We created comic books and dialogue, and asked the children make an outcome. In one story, children were making a mess by spilling food on the living room furniture and rug. When a mother’s voice said *are you spilling food?* the children told us the mother wanted the children to stop. In one project, we located American and English children who had lived in Geneva, Switzerland, six to nine months and were in French-medium schools. When we used the food-spilling story with such children in Geneva, and have the mother say, "Eh ben, c’est bien," the child would still say the mother wants them to stop. But when for this sample of children we did the story in English, and the mother said “Great, go right ahead, it's good,” children under seven were baffled. *She’s lying, she’s tricking,* they say. After seven, they did not expect literal prohibitions any more, even in English, and could interpret the sarcasm.

What this tells us is that language choice provides clues to the interpretation of meaning. Children in Geneva told us they had heard in French this type of sarcastic comment, which is routine in families in continental Europe. They learn early what it means. English and American children do not hear this type of conversational challenge in their families. When they live in Geneva, they can recognize it in French, however, because it is in the context of French conversations that they hear such talk (Ervin-Tripp, Strage, Lampert & Bell 1987).

**Code-switching.** Children, like adults, switch language to convey new meanings, changing the cultural resources they can draw upon. The belief contexts for their speech have changed along with the language.

(16) Dispute between two Chinese 5 year olds in American classroom:

A: My father, bigger your father.
B: You father big big big big

---

\(^7\) We are not sure how adult compliance is altered by videotaping in the home.
A: My father my father like that [reaches high]
B: My father stronger your father!
A: My father like that [wide stretch]
B: Hunhuh, my father stronger, faster..

[switch to Cantonese]
A: I’m gonna tell your father that you steal things.
B: When did I steal things?
[A enumerates]
A: When we go outside, I’m gonna hit you.
B: Well, you’ll have to run very fast.....
A: ....When you grow up and you steal, your wife isn’t going to like you. Ervin-Tripp 1981

It strikes me that this is an un-american prediction. It would not have been made in English.

Children’s subtle observation of the background features of adult speech is never revealed so fully as in their role play. Below are some segments from studies of doll and puppet play in four and five year olds.

(17) Role playing with dolls
Director: uh now *pretend he doesn't have a broken*arm
Doctor{*lower pitch} *well, we were *wrong about the broken *arm}  Kyratzis, 1993. 7;09

(18) Puppet play
Child DOCTOR: uh *well i think ya have a *hernia
Adult PATIENT: what's a *hernia?
Child DOCTOR: it’s a *sickness like a *disease..... well **she's dead.

(19) Puppet play
Child FATHER: will my little girl be okay?
Child DOCTOR: yes, she will. but do you vant to sleep with her all night long? For every day?
Child FATHER well, yes, I do. Andersen 1990

In these scenes, the child “father” and the “doctor” display their authority with ‘well’ as a marker of being in charge, as well as technical vocabulary. In addition, the voice pitch distinguishes men from women, and sometimes doctors from fathers. The German accent in (19) is another evidence doctors are special.

Andersen found that younger children change the accent and pitch to represent roles. Later they also change vocabulary, speech acts (who gives directives), and the style of directives. The subtest feature noticed by the children was the coding of status by the little discourse markers at the beginnings of utterances, like these:
(20) Puppet play
Child TEACHER: *okay *now *well the first thing I would like
to ask you have you ever been to school, kay?
Child TEACHER: *well now then I think you should
take out your *papers.

Andersen 1993

The children noticed that these markers occurred more in high status speakers,
and that low status speakers used *uh more often. The ‘okay’ of teachers is of
course stereotypic, but it is precisely these stereotypes that children are busy
acquiring from incidental observation of speech features.

Anyone who speaks French knows that there is a high frequency of turn
initiators like *eh bon, bien mais... The French children in playing roles mark
status with the choice between these markers, with *bien more frequent with
higher status roles, and *eh with lower status roles (Andersen 1993).

Conclusions

What we have found is that children are sensitive to the social and
interactional features of the context very early. These they encode linguistically
by their choices of pronouns, person, aspect, modal auxiliaries, pitch, prosody,
discourse markers, register and vocabulary choice. If they are bilingual, they
switch language for social purposes, altering rhetorical resources and cultural
allusions.

When we look at natural talk we find it filled with indicators of the setting.
This situational indexing is learned very much in the same way as word meaning,
by a very powerful context-sensitive memory device. Contextual co-occurrences
with linguistic features are stored in a frequency calculator, so that the correlated
features come to index context, and indeed can be used to change the social
interpretation of any malleable features such as situation and status. Economies of
form can then occur through multiple meanings (polysemy). That is, if a form
changes its interpretation according to context, the storage process must include
information about the relevant contextual factors. Since such polysemy is very
frequent, the human mind must prefer polysemy and contextual indexing over
simple vocabulary expansion.

The language acquisition system cannot discriminate what will go into the
dictionary and the grammar from the rest of contextual information. Evidence
that there is massive learning of language features beyond those described in
current lexicons and grammars suggests that current theories of language
acquisition have too narrow a definition of language.

Why have we so systematically kept context out of the language system?
There are certain points where it crept in even in the most formalist linguistics.
There was no way to deal with such differences as imperative versus interrogative
without at least thinking about function (though as we have seen, the relation is
complex). Languages like Korean that index addressee or referent status force us
to find out what status is for the speaker. Robotics designers have been
compelled to address those aspects of context at the time of speech that would
affect the ability of the machine to carry out commands, that is, aspects of language dealing with contextual physical features such as motion and direction. Such attention is within the paradigm of focused attention and reference mapping. But directions for robots, unlike human directions, do not have to deal with extensive presupposition and allusion. Robots are not polite. They do not run the risks that airline pilots do, of failing to understand directives because of social masking\(^8\) (Linde 1988).

The omission of context from linguistic accounts has occurred because some linguists have considered contextual structure to be too chaotic, too idiosyncratic, to be characterized systematically. When linguists began to identify variable rules (Labov 1969), the separation of the variable from the obligatory or categorial was obvious and unavoidable. Variationists have gradually introduced context into their analyses. What we are now beginning to do is use contrasts in linguistic features, including those that are variable, as our guideposts for identifying both the structure of conversation and the structure of context, indeed the immediate social structure for speakers. Linguistic features can tell us what are natural human categories for context. Such an approach can at last systematize the domain of context.

REFERENCES


\(^8\)Linde’s study of airplane crashes and airplane simulated cockpit exchanges revealed that important warnings from subordinate personnel might be couched in the language of deference and fatally ignored.


