Towards an Anthropology of Language Acquisition

by

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Abstract

Current theories of language acquisition are limited by the data base they seek to explain. Focusing exclusively on the acquisition of a relative handful of languages inevitably leads to theories which assume some property of these languages is universal, and therefore exploitable in acquiring language. An anthropological perspective serves as a reminder of the extent to which languages may differ. A better appreciation of these differences is necessary to understand the child's potential to acquire any human language. This paper explores some ways in which an anthropological perspective provides the necessary basis for an account of several aspects of the acquisition process. The prelinguistic period of development is one with enormous differences between cultures. The patterns of development in phonology, morphology, syntax, and semantics also appear to be profoundly influenced by the adult language structures. Only generalizations that are valid across the full range of cultural and linguistic diversity can contribute to the explanation of language acquisition.

Towards an anthropology of language acquisition[1]

The quest for an explanatory theory of language acquisition has a tendency to lead to premature speculation about the way in which a biological organism equipped with innate predispositions of one sort or another reacts to its linguistic environment. The assumption of a single language acquisition process makes an explanation of the process easier in several ways. First, we need only investigate how children learn to speak English in the United States since (presumably) children everywhere have the same abilities and face the same problems. Second, the discoveries we make about the process of acquiring English in the United States provide an outline of the steps involved in acquiring any language since (presumably) this sequence is generally the same. Finally, our explanation of how children acquire English in the United States will serve as a theory for the acquisition of all languages since (presumably) children learning English use the same procedures that children learning other languages use.

While investigators collecting data on the acquisition of English have shown there can be significant variations between children acquiring the same language (Goldfield & Snow 1985; Wells 1986), theorists still seem wedded to the belief that all children follow essentially the same general path in acquiring language (cf. Pinker 1984; Slobin 1985; Brown 1973; Chomsky

1982). Such 'monotonic' theories appear to account for the acquisition of English because they incorporate its structure and development into various aspects of the theory. Data on the acquisition of other languages (particularly non-Indo-European languages) highlight the ways in which current acquisition theories incorporate English structure into their assumptions. For example, many theorists simply assume that children have broken the speech stream into a series of words before they begin the acquisition of syntax (Wexler & Culicover 1980; Pinker 1984). Such an assumption may be an accurate reflection of how children learn English, but is obviously defective when confronted with the polysyllabic constructions of the Eskimo and Algonkian languages (cf. Pye 1983).

An anthropology of language acquisition provides a more general framework in which to pursue the goal of explaining how children learn language. A central assumption of such a framework would be an acknowledgement of significant differences between cultures in the linguistic environments they provide for their young. The differences are significant in the sense that in some cases they lead to the early acquisition of such complex aspects of language as the passive or middle voices, perfective or future tenses, and ergative or absolutive cases, among other things. As Bowerman (1985) observes, children show a remarkable ability to get immediately to the heart of whatever structural peculiarities their language may contain.

One benefit of such a perspective for the study of language development would be a comparative data base that is less likely to be biased by cultural and theoretical preconceptions. This would make it less likely that significant structural differences between the acquisition of different languages go unnoticed. Another benefit might be the development of a more flexible theoretical framework with multiple starting points and pathways for the acquisition of grammar. In this paper I examine a number of explanations for the acquisition of different aspects of language and demonstrate ways in which the search for universals has led researchers to disregard considerable cross-linguistic diversity.

The starting point

A theory of language acquisition must account for the succession of language forms in particular contexts. There is no point at which such an exchange is free of significant contextual effects. Caretakers have a particular set of expectations and beliefs to communicate to their infant, while the infant controls the amount and type of information it is willing to accept as well as messages about its own internal state and the external environment. The infant's physical state is the result of pre- and perinatal conditions as well as the opportunities provided for motor and visual development (Lester & Brazelton 1982; Super 1981). Finally, the exchanges take place in a physical

environment that is, itself, the product of such cultural forces as social structure, economic modes, and architectural styles. There is little indication in the acquisition literature that starting points can vary so dramatically.

Richards (1977) provides persuasive arguments against a false dichotomy between biological and social factors in human development. As he points out, this leads to a belief that a set of invariant biological factors may be isolated away from the more variable social factors. Richards observes that children have 'developed through an ontogenic process which is permeated by the social world (from the moment of conception and earlier), and this process itself has evolved in the context of earlier human societies' (p. 190). Human evolution is the result of natural selection operating on individuals in social groups, and as such has been inevitably affected by cultural practices.

Cross-cultural research aimed at isolating behavioral differences among various populations of newborn infants is predicated on the assumption that such differences reflect biological predispositions. Freedman and Freedman (1969), Freedman (1971) attribute similarities between Japanese and Chinese-American and Navajo infants to their supposed common genetic inheritance. Likewise, much of the research with African infants assumes that they have a common genetic background, and therefore possess common instinctual traits (Geber & Dean 1957b; Jensen 1969; Brackbill & Thompson 1967).

Several investigators have commented on the difficulty of measuring 'innate' reflexes in profoundly different situations (Super 1981 reviews these difficulties in detail). deVries & Super (1979) investigated infants from several Kenyan groups in traditional homes and modern hospitals. They found that 'physical context (e.g., amount of light), social context (who is present and what they believe about the infant's hardiness, comfortable home or impersonal hospital, etc.), and patterns of care (swaddling, rubbing with oil, rhythms of feeding) all affect the newborn's behavior on the examination and that this properly reflects the way the infant and family are actually adapting to each other' (Super 1981:193). In their discussion of the obstetrical and postnatal factors affecting neonatal behavior Lester and Brazelton conclude that 'neonatal behavior represents the phenotypic expression of the interplay of genetic and environmental influences' (1982: 23). Controlling for environmental differences actually amounts to substituting Western ideals of infant care for indigenous practices. Any study which managed to control all the confounding social variables would only succeed in isolating infants who have nothing in common with their peers.

Without trying to attribute behavior to biology or environment, one finds an enormous range of infant behaviors cross-culturally as well as different cultural practices regarding childcare and infant stimulation. Indeed, cultural

practices and infant behavior have probably developed in common so that the practices optimally support certain behaviors which in their turn lead to distinctive patterns of childcare. Brazelton (1977) provides one example of a culturally specific pattern of infant-caretaker interaction. He participated in a study of Zinacanteco newborns from the Chiapas highland region of Mexico (Brazelton, Robey & Collier 1969). They found that the infants developed in intrauterine conditions of subclinical malnutrition, infection, and mild hypoxia (low oxygen). These conditions resulted in quiet, alert infants who produced few vocalizations. Heavy swaddling and frequent nursing also limit the infants' motor and vocal activity. In fact, any activity is interpreted by Zinacantecos as an indication that the baby is ill. Heavy swaddling is used to prevent 'soul-loss' and ward off the effects of the 'evil eye'.

Reviewing the literature on the precocity of motor development in African infants Super (1981: 204) concludes that the studies do demonstrate advanced proficiency in motor development in the first year or two of life. Skills related to sitting and walking are the most reliably demonstrated aspects of African development. Super also notes that, 'One or both skills are deliberately taught by most, if not all, traditional African cultures on which we have relevant information...' (p. 204). This seems to be especially true of East African groups. 'For sitting, the most common procedure involves propping up the

infant in a circle of cloths or towels or placing the infant in a
shallow hole.... Standing and walking are usually taught just as
they are tested in the Bayley procedures: hoisting the baby to
the upright position and slowly withdrawing support, or holding
the baby's hands and slowly "pulling" him or her forward' (pp.
204-205). Thus, African parents attempt to stimulate motor
development while Zinacanteco parents try to reduce it.

No survey of cultural patterns of childcare would be
complete without mentioning the Western middle-class practice of
vocal stimulation. There is by now a large literature on the
properties found in speech to children (see Ferguson & Snow
1977; Snow 1984). There is also a growing realization that such
properties may only be true of caretaker speech in a few
societies (Pye 1986). Rebelsky (1973) reported that while
American mother-infant pairs increase their rate of mutual
vocalization between 2 and 12 weeks, Dutch pairs decrease
their's. Summarizing several studies Super (1981: 229) reports
that at 3 or 4 months American infants spontaneously vocalize at
least once during about 59 percent of their daytime waking
minutes, while infants from rural Senegal and Kenya vocalize 39
and 27 percent, respectively, and Japanese and Navajo infants
vocalize in just 30 percent of their waking minutes. Super adds
that, 'If the estimates are reasonably accurate, the fact that
American infants vocalize at about twice the rate of infants from
a variety of other cultures may call into question the

generalizability of American findings regarding the correlates of early vocal development...' (p. 229).

There is an enormous variability between cultures on who should speak to infants and how infants should be addressed. A number of ethnographies even suggest that infants are not part of the social community. Thus, Kipsigis mothers in Western Kenya call their infants 'monkeys' (Super 1981), young children in Java are lumped together with boors, simpletons, the insane, and the flagrantly immoral because they are 'not yet Javanese' (Geertz 1973), while the Tzotzil Maya also consider babies 'not yet fully human' (Vogt 1976). Super (1981:19) notes that, 'Cultures differ in their typical view of the fragility of the newborn (deVries & Super 1979), the "naturalness" of crying (Revelsky 1973), and the value of encouraging babies in particular skills (Blount 1972; Harkness & Super 1977; Super 1976).' Such different views of infants will have a profound affect on children's communicative development.

Phonology.

Monotonic theories of phonological acquisition began with Jakobson's (1968) theory that children add different features to their phonological repertoires in a single manner. Children were supposed to first distinguish consonants from vowels, and then labial from velar consonants. Ferguson & Farwell (1975) demonstrated that a single developmental progression was not true

for children learning English while Macken (1980) showed that it was also not true for children learning different languages. In place of Jakobson's universal theory, Ferguson & Farwell (1975), Kiparsky & Menn (1977), Locke (1983), and Menn (1983) proposed theories that combined individual preferences with an underlying physiological base. These theories use the physiological base to account for similarities in phonological development.

However, these models cannot explain the systematic differences between children acquiring different languages. Pye, Ingram & List (1984) showed that children acquiring the Mayan language Quiché all exhibited the same differences from children learning English. The early Quiché consonants not present in the phonological repertoires of children learning English include /tʃ,l,x,7/. This result suggests that physiology, by itself, can not explain the similarities in children's phonological development. We found that the children's acquisition orders were correlated with the frequency of occurrence of the sounds in adult lexical types. This suggests that children extract sounds from their initial lexical acquisitions rather than in an online fashion of working with every word they hear. If a sound occurs in a significant portion of the adult forms for words in a child's early lexicon then the sound is a likely candidate for early acquisition. The theory explains the early appearance of words beginning with /b,d,k/ in English by the number of English words which begin with /b,d,k/. It predicts that languages which

exploit other initial consonants should also have a different acquisition order.

This finding has important implications for an anthropological perspective on language socialization. Rather than predicting a single, universal order of acquisition as the innatists might, or a random assortment of early sounds as the cognitivists might, the theory predicts that a cultural determinant - the number of words with a given sound - is responsible for acquisition orders in phonology. Such a theory can only be tested by collecting data from languages with significantly different phonological repertoires from English. Our predictions have been upheld in a number of investigations (Ingram & Mitchell, to appear; Ingram 1985). A further consequence of our theory is that linguists can no longer appeal to a physiological basis to explain similarities in the phonologies of the world's languages (cf. Maddieson 1984). If children can acquire different sounds equally easily, then the distribution of sounds in the world's languages must reflect a historical accident of survival rather than the physiological propensities of children.

Morphology.

Morphology is the best area in which to develop a comparative theory of language acquisition simply because there is a relative abundance of data on morphological acquisition from genetically

unrelated languages. Despite this data, there is still a widespread assumption that the overall course of morphological acquisition is similar across languages. This was the assumption behind Slobin's (1973) method for comparing languages in order to discover children's processing strategies. This position was reinforced by the results of Brown's (1973) study which concluded that the acquisition order of 14 grammatical morphemes in English was determined by a conjunction of syntactic and semantic complexity. Slobin (1985) proposes a universal starting point for language acquisition which he labels Basic Child Grammar. The idea is that, "When functors are first acquired, they seem to map more readily onto a universal set of basic notions than onto the particular categories of the parental language. Later in development, of course, the language-specific use of particular functors will train the child to conceive of grammaticizable notions in conformity with the speech community..." (1174).

Pinker (1984) contains a discussion of just such an account of morphological acquisition which he labels the hypothesis sampling model (171). Basically, a child is equipped with a weighted set of hypotheses to be entertained when confronted with a new morpheme. The weightings reflect Slobin's idea of a Basic Child Grammar. When a hypothesis is confirmed on the basis of the input, it is strengthened while any hypothesis that is

contradicted by the data is removed from the set of
possibilities.

While such a model accounts fairly successfully for a wide
range of acquisition data, Pinker lists seven fatal defects.
Most of the defects have to do with the mechanics of the model,
but one reflects the concerns of the anthropological perspective.
The model requires the child to apply every potential hypothesis
to the particular language he or she is learning. Pinker
concludes that, "It seems more plausible that some mechanism
would draw the child's attention to distinctions made by the
target language in cases where those distinctions are uncommon
cross-linguistically or cognitively nonsalient" (173). An
anthropological perspective would lead to a search for the
mechanism(s) which enables children to quickly determine the
function of cross-linguistically uncommon morphemes. The
existence of such mechanisms obviate the need for Basic Child
Grammar.

Slobin presents many examples in support of his thesis.
Perhaps the most interesting is MacWhinney's finding that
Hungarian children have so much difficulty learning that the verb
in Hungarian must agree with the definiteness of the object.
Slobin assumes that children expect definiteness to be indicated
in the noun phrase rather than in a verb affix. However, there
are also many examples which contradict the Basic Child Grammar
hypothesis. Children acquiring languages with rich morphologies

(e.g., Finnish, Mohawk, Quiché, and Turkish) use some inflections appropriately from the beginning. Moreover, the early morphemes encode a wider range of meanings than would be expected under any conceivable version of the Basic Child Grammar hypothesis (see Table 1).

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XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
X                                         X
X                 Table 1                 X
X                                         X
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
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The morphemes in Table 1 are actually more heterogeneous than they appear since I have eliminated details of their function in particular languages. Some observations are obvious. The copula is acquired far earlier in Estonian and Hindi than it is in English. Infinitival forms of the verb are early acquisitions in Estonian, Hindi, and Russian. Negation is marked early in Japanese, Quiché, and Turkish.

One hitherto unnoticed acquisition is the variety of emphatic and evidential particles in the speech of children acquiring Dakota, Japanese, and Quiché. These particles communicate aspects of the speaker's attitude and feelings and reflect the utterance's presuppositions. These particles display a type of metalinguistic awareness that is only evident in the later stages of the acquisition of other languages. Clancy's (1985:427-435) discussion of sentence-final particles in Japanese is the best available description of these morphemes in child

language. She makes it clear that the specific meaning of these
particles in Japanese is determined by the particular context of
use. The most complex particle, no, has been analyzed in many
different ways, as a marker for indirectness and softening,
politeness, reservation, and emphasis, explanation or
amplification, evidence, and emotional connotations such as
concern, surprise or reprimand (Clancy 1985:432).

Among the morphemes listed in Table 1, the Quiché proadverb
is probably the most embarrassing early acquisition for the Basic
Child Grammar hypothesis. The locative proadverb has no meaning
of its own, its function is entirely grammatical. It only
appears when a locative phrase has moved to a preverbal position.
It is obligatory in questions about locations since the wh-phrase
always appears in sentence-initial position. It is remarkable
that Quiché children consistently use the proadverb in their
earliest questions (Pye 1980).

The best explanation for the early acquisition of this
variety of morphemes is their physical properties. They all seem
to share some properties of independent words. The most
important seem to be that they are stressed syllables that may
appear in utterance-final position (Pye 1980, 1983). Frequency
of use may also be a factor, but simple token frequency does not
account for morpheme acquisition orders (Brown 1973; Pye 1980).
My current hypothesis is that children extract morphemes from
their lexicon in the same fashion that they extract phonemes (see

also MacWhinney 1985). This hypothesis predicts that children will acquire a morpheme that is used with many different words before they acquire one that is used frequently, but only with a few words. Sudhalter & Braine (1985) provide additional evidence for the hypothesis from data on children's comprehension of passives in English.

The hypothesis has a number of implications for language processing and acquisition theory. Children may be fooled by a suffix that constantly appears on the same word into believing that the suffix is part of the word. Therefore, a high token frequency, but low type frequency would lead to the type of nonproductive morpheme usage that Brown (1973) described in regard to the contracted form of the English negative (e.g. won't, can't). The hypothesis also predicts that meaning is not important in the process of extracting inflectional morphemes. Children acquiring any language will acquire the morphemes of the language in an approximately invariant order, but the orders will be different for different languages. The hypothesis is compatible with the models of Pinker (1984) and Maratsos & Chalkley (1981) who adopt a distributional analysis procedure for inflections. Finally, it would appear that morpheme acquisition is another area which is guided by idiosyncratic properties of the adult language. If a language makes heavy use of a particular morpheme (and the anthropological literature gives many examples) then children will also use the morpheme in their

anthropological literature gives many examples) then children will also use the morpheme in their first utterances.

Syntax

Syntax is often thought to be one of the least variable areas in the acquisition of language. This belief is partly a reflection of Chomsky's theory which stresses the innate character of 'Universal Grammar' as well as the results reported by Brown (1973), Slobin (1973) and others on the relative uniformity of children's early utterances in different language communities. These results have led to the belief that a small set of semantic relations (agent, action, patient, etc.) account reasonably well for the syntactic structure of children's first utterances (Brown 1973; Bowerman 1973; Pinker 1984). Once again, the only information we have on the early stages of syntactic acquisition comes from languages with similar syntactic and discourse structures.

I have been investigating the implication of cross-linguistic verb-argument structure differences for theories of syntactic acquisition. Essentially the idea is to explore cross-linguistically the notion that subjects correspond to agents and objects to patients. Chomsky's current theory assumes such a correspondence to account for the θ-roles attached to individual verbs (cf. Chomsky 1981; Borer 1984). Various accounts of syntactic acquisition also presuppose a universal correspondence

between subjects and agents, and objects and patients (Bowerman 1973; Pinker 1984; Wilkins 1985). For example, the child acquiring the verb meaning *hug* in whatever language should (at least initially) put the thing getting hugged in the object position of the sentence or mark it with the accusative case (or absolutive if the language is ergative).

There are three ways in which the verbal argument structure might differ from one language to the next. First, the semantic roles associated with transitive verbs might be reversed so that the patient appears as the subject while the agent appears as the object. Second, the number of semantic roles associated with the verb might differ from one language to the next. Finally, languages might differ on the semantic role associated with the subject of intransitive verbs. The key question is whether there is any constraint on these differences between languages. If there was some constraint, then a child learning his or her first language might use semantic roles as a guide to syntactic structure for all but a minority of 'marked' verbs. If there is not such a constraint, then children must rely upon positive evidence alone to work out the correspondence between semantic role and syntactic position.

In conducting a cross-linguistic survey of verb argument structures, a major problem is to find the closest translation equivalent of the verb in question. Verb argument structures are typically used to find a translation of particular verbs. If the

argument structure is different, the problem may be resolved by resorting to a literal translation that preserves the argument structure of the foreign verb. One example would be to find an English translation for the Spanish verb *gustar*. The verb is used in situations where an English speaker would use the verb *like*, e.g.

> *Me   gusta   la canción.*
>
> me-DAT pleases the song
>
> 'I like the song.'

The morphemic gloss uses the English verb *please* while the idiomatic translation uses *like*. The morphemic gloss really attempts to preserve argument structure by finding an English verb which would assign *song* to the subject position in the way that *gustar* does. The choice of which English translation to use for *gustar* clearly depends on a theoretical assumption about the relative priority of verb argument structures or situations of use. Simply assuming that children have access to verb argument structures resolves the learnability problem in a trivial way.
If we assume that children only hear utterances in particular situational contexts, however, then they must work out the verb's argument structures on the basis of information from the context.
Children acquiring Spanish will have to learn to associate 'song' with the subject of the verb *gustar* while children acquiring English must learn to associate it with the object of the verb

like. Clearly, patterns of usage will provide the only neutral way of deciding on a translation for verbs.

Another translation difficulty is created by the problem of finding 'basic' sentences. Pinker (1984), following a suggestion in Keenan (1976), hypothesizes that children will begin their acquisition of a language by analyzing basic sentences that are 'simple, active, affirmative, declarative, pragmatically neutral, and minimally presuppositional' (p. 46). This is a long list of criteria, and it is reasonable to doubt whether all of the features on the list are true for 'basic' sentences in different languages. The features of pragmatic neutrality and minimal presuppositions seem especially susceptible to cross-linguistic variation. Brody (1982) and Durbin & Ojeda (1978) provide examples of how difficult it is to define a basic word order. Durbin & Ojeda, for example, demonstrate that there is no difference in morphological complexity between active and passive sentences in Yucatec Mayan. Once again, usage patterns would seem to provide the only theoretically neutral way of deciding what count as basic sentences in a language. If the language typically encodes events in a way that corresponds to the English passive, then we must conclude that it is the basic sentence form.

Having said this much, it is possible to find examples of different verb argument structures across languages. Languages which reverse the argument structures of English verbs are the

most difficult to find, although the so-called 'true' ergative
languages may be examples of this sort (cf. Levin 1983). Some
languages make frequent use of a 'passive' structure for various
reasons. Sapir and Swadesh (1946), for example, note that the
passive in Yana is the only method ever used for a third person
acting upon a first or second person. Yana children would have
to learn to reverse the argument structures of sentences with an
agent in the third person.

Hopper and Thompson (1980) provide many striking examples of
the differences to be found between languages in the number of
arguments of verbs. They argue that syntactic transitivity is
determined by a complex set of factors (the number of
participants, the amount of kinesis, aspect, punctuality, and
volitionality to name a few). Which of these factors determines
the transitivity of particular verbs is a matter for the
individual languages. Some languages may require two syntactic
arguments for verbs that are 'low' in transitivity, while other
languages may use one argument for verbs that are 'high' in
transitivity. Children learning their first language could use
the value of one transitivity feature to predict the value of the
others, but they would not be able to predict which values
determine the transitivity of particular verbs.

One area in which there are interesting transitivity
differences between languages is reflexives. A reflexive verb is
syntactically transitive even though the action involves only a

single participant. Thus, it is possible that some languages will encode an action or state with a reflexive verb while others will encode the same action or state with an intransitive verb. An example is the Quiché verb *-xe'j -iib'* meaning 'afraid'. It is syntactically transitive (with a literal meaning 'to scare oneself'), however it is used to encode a state involving only a single participant. Eastern Pomo also has a number of such reflexive verbs (McLendon 1978). Causative suffixes provide another means of making a transitive verb. In this case, it is even clearer that cultural perceptions about what constitutes a causitive relation determine which verbs may become causatives. Gergely & Bever (1982) note that *bleed* historically had a causative usage that has been lost in modern English. Languages may also distinguish between the degree of control an actor has over an action, marking the actor as either an agent or patient. Examples may be found in Eastern Pomo (McLendon 1978:3) and Lakhota (Boas & Deloria 1941; Van Valin 1977).

Finally, languages might differ on the semantic role associated with the subject of intransitive verbs. Perlmutter & Postal (1984) and Rosen (1984) have explored this possibility in their search for evidence bearing on the Unaccusative Hypothesis. The Unaccusative Hypothesis says that some nominals in intransitive clauses may behave as subjects, while others will behave as direct objects. Rosen (1984) provides evidence for the Unaccusative Hypothesis from Italian, Sanskrit, Albanian,

Choctaw, Dutch, Lakhota and Turkish. In Italian, for example, there is a basic distinction between the intransitive verbs which take the auxiliary *avere* in compound tenses and those which take the auxiliary *essere*. The distinction is not semantically motivated. There are sentence pairs like the following which involve the same verb, but a different surface subject:

    a. Mario ha continuato.   (*é)

       'Mario continued.'

    b. Il dibattito é continuato.   (*ha)

       'The debate continued.'

Such evidence also bears on the Universal Alignment Hypothesis of Perlmutter & Postal (1984). This hypothesis states that, 'There exists some set of universal principles on the basis of which, given the semantic representation of a clause, one can predict which initial GR [grammatical relation, CP] each nominal bears' (Rosen 1984:40). Given the differences between languages in their encoding of subjects of intransitive verbs, it is impossible to maintain the Universal Alignment Hypothesis. Rosen proposes in its stead the Little Alignment Hypothesis which states that, 'For any one predicate in any one language, there is a fixed mapping which aligns each semantic role with an initial GR (grammatical relation). The alignment remains invariant for all clauses with that predicate' (1984:53).

This review of just a single aspect of syntax suggests that there is considerable variation across languages in the basic

structure of verb arguments. This implies that children will not be able to assign nouns to a subject or object role on the basis of a verb's meaning. Children who are acquiring different languages in identical situations will have to decide which nouns fill the particular syntactic frames. It may be that English verbs have an unmarked association between semantic roles and syntactic arguments. Children acquiring languages with more marked associations might then assign semantic roles to the wrong syntactic argument. Evidence from the acquisition of ergative languages suggests that this does not occur (Pye 1984; Schiefflin 1981). What is required, then, is an explicit account of how children manage to resolve the argument structures of verbs from the input and particular situations of language use. An anthropological perspective helps us understand the difficulties involved in this process.

Lexical Semantics

Lexical acquisition is still another area in which an anthropological perspective would be useful. Current explanations for lexical acquisition reflect psychological theories about perception and cognitive/semantic complexity (Jackendoff 1983; Keill 1985; Miller & Johnson-Laird 1976). Gentner (1982), for example, has offered what she terms the Natural Partitions hypothesis (Camaratta & Leonard 1986 provide some experimental results). Gentner's hypothesis states that

'(1) the linguistic distinction between nouns and predicate terms, such as verbs and prepositions, is based on a preexisting perceptual-conceptual distinction between concrete concepts such as persons or things and predicative concepts of activity, change-of-state, or causal relations; and (2) that the category corresponding to nouns is, at its core, conceptually simpler or more basic than those corresponding to verbs and other predicates' (Pp. 301-302).

A number of factors other than conceptual simplicity might be responsible for Gentner's results. Gentner discusses some of these in her paper. The frequency with which the different syntactic classes occur is one factor. Gentner provides data for English to show that verbs have a higher token frequency than nouns. However, the results from the acquisition of phonology and morphology suggest the possibility that type frequency is more important. Children might pay more attention to word changes than to repetitions of the same word. They might reasonably assume that the most variable part of a sentence carries the most information and would be more important to express. Gentner does not provide any data on token frequencies in the children's speech. However, the type frequencies for adults agree fairly closely with those of the children (46% nouns vs. 20% verbs for adults and 67% nouns vs. 22% verbs for the children).

Phonological and morphological simplicity also favor the acquisition of nouns before verbs in many languages. Verbs usually have more affixes than nouns which increases both the morphological complexity of the verb and the number of syllables it contains. For this reason most of the languages that Gentner used in her survey (Turkish, Kaluli, English, German, Japanese) would be expected to favor the acquisition of nouns before verbs. Gentner cites data from Mandarin Chinese, which being an extremely isolating type of language, has nouns and verbs that are roughly equivalent in phonological and morphological complexity (although there are still a few verb suffixes to confuse the issue). The Mandarin data supports the Natural Partitions hypothesis, but not as strongly as the other languages.

Such a test ignores the frequency effect which I discussed above. Isolating types of languages such as German, English and Mandarin make frequent use of noun phrases to express major constituents of the sentence. The typical English sentence must contain at least one noun to be grammatical, and often contains two or three. Many elliptical responses to questions in English consist entirely of a noun or noun phrase (e.g. "this sentence.", "a cat."). English speakers frequently use nouns to refer to events and actions (Lakoff & Johnson 1980 discuss the power of the object metaphor in English). Caretaker beliefs about children's language may also influence what they report as the

children's first words. It may be easier for parents to recognize when a child is labeling an object than when s/he is discussing an action or event. This would lead to a bias among caretakers (and perhaps researchers) to report object labels before action labels. Thus, it is little wonder that children acquiring languages like English start with nouns.

Cultural influences are detectable in the acquisition literature on isolating languages. The data that Gentner provides shows some interesting differences in the early vocabulary of children living in various communities. In some (Chinese, Kaluli) kinship is most important, and children first acquire the terms for various kinship relations. In others (United States, Germany) material possessions are most important, and children begin by acquiring the names of various objects in their environment. One Turkish child acquired names for both kinship relations and material possessions.

At present, however, we lack data on lexical acquisition from the language communities that would provide a real test of the nouns before verbs hypothesis. Salish, Eskimo, Algonkian and Athabaskan languages all place a premium on verbs rather than nouns. This is because these language groups use person markers to indicate the subject or object of the sentence, making the use of a separate noun phrase redundant. In the extreme case of the Salish language group there is evidence that the phrases which refer to the subject or object belong to their own clause rather

than serving as arguments of the main clause (Kinkade 1981).
Nouns in many Salish languages are derived from verbs by the
addition of a nominalizing prefix. I would predict that children
acquiring such languages would begin with verbs rather than
nouns.

There is some evidence for linguistic relativity from
languages which place more emphasis on verbs than English.
Quiché, for example, uses person marking on the verb to indicate
the subject and object of a sentence. It also has a pro-drop
rule which deletes redundant pronouns. This results in fewer
sentences with overt noun phrases in the subject and object
positions of the sentence. The early lexicon that I collected
from one child shows a mix of nouns and verbs. Gentner's data
from Kaluli also shows an early mix of nouns and verbs (see also
data on Mohawk (Feurer 1980) and Dakota (Nokony 1978)). Thus, I
would contend that the verdict is not yet in concerning early
lexical acquisitions. We still lack an essential understanding
of children's real word-learning powers.

Conclusion

In this paper I have attempted to demonstrate some ways in
which current acquisition theories are limited by the data base
they seek to explain. Focusing exclusively on the acquisition of
a relative handful of languages inevitably leads to theories
which assume some property of these languages is universal, and

therefore exploitable in acquiring language. There is an urgent need to expand the acquisition record to include languages with different structural properties. This need is made more urgent by the rapid encroachment of Western culture on traditional societies. In the past, language acquisition took place in very different cultural settings. The spread of Western patterns of childcare may change the pattern of language acquisition even before the language, itself, changes. A better appreciation of the remarkable differences in language structures is necessary to define the child's real potential to acquire any human language. An anthropological perspective serves as a reminder of this diversity while providing insights into the child's ability to succeed in acquiring language amidst vastly different cultural settings and expectations.

NOTES

Table 1. Early morphological acquisitions.

Language	Source	Morpheme(s)
Estonian	(Lipp 1977)	present copula, nominative plural, infinitive
Dakota	(Nokony 1978)	deictic, evidential, 'it says or goes like that'
Hindi	(Varma 1979)	imperative, infinitive, possessive, copula
Garo	(Burling 1959)	imperative, past, future
Japanese	(Clancy, 1985)	negation, emphatic, agreement, topic, deictics
Latvian	(Ruke-Dravina 1959)	nominative, accusative, indicative, imperative
Luo	(Blount 1969)	subject and object markers on verb
Mohawk	(Feurer 1980)	deictic, personal referent, future, punctual
Polish	(Smoczynska 1985)	gender, tense and aspect, hypotheticals
Quiché	(Pye 1980)	negation, directionals, transitive, proadverb
Russian	(Slobin 1966)	number, diminutive, imperative, infinitive
Turkish	(Aksu-Koc & Slobin 1985)	noun cases, plural, person, negation

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