Introduction

In recent years, the points of view in linguistics that have come to be known as functionalist have evolved in some isolation from each other. In keeping with their inductive preferences, functionalists who study child language are not unified behind a shared, well-articulated theoretical position.

What is functionalism? Both Silverstein (1987) and Nichols (1984) have analyzed in detail the variety of ways *functionalism* has been used by linguists. Silverstein made a division into four types of functions, referential and pragmatic:

(a) `sense-structure',
(b) the `abstract, "sentence"-internal distribution of forms,'
(c) the `use of signal forms for purposive, intentional social effect'
(d) the `indexical occurrence of form tokens' with reference to discourse and non-linguistic context.

Though the referring and predicating function (b) of language is in a sense subsidiary, because it is just one type of communicative purpose (c), it plays a major role in adult language `because of its unique representational capacity' (Silverstein 1985, 214). Sense-structure and reference-and-predication `are the prototype cases in the consciousness of speakers of the language' (1987, 36) and have had most influence on American linguists' and psychologists' notions of function.

Nichols says that `functionalists maintain that the communicative situation motivates, constrains, explains, or otherwise determines grammatical structure, and that a structural or formal approach is not merely limited to an artificially restricted data base, but is ipso facto inadequate even as a structural account' (Nichols 1984, 97). She then goes on to elaborate in detail five uses of *function*:

(a) interdependence, co-variation,
(b) relation to higher order structural unit (e.g. subject, topic),
(c) communicative purpose (e.g. ordering, nominating),
(d) context of speech act including functional/event categories (e.g. status of addressee) and functional/text categories (e.g. backgrounding),
(e) meaning (which can combine several of the other functions).

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1 The members of the panel are grateful to those who joined in an e-mail discussion of the ambiguities and the controversial issues implied by the panel talks, and replied to some queries, especially the lengthy and clarifying correspondence of Paul Bloom, Nina Hyams, Steven Pinker, Clifford Pye, and Dan Slobin. This paper has been critiqued at various stages by Dan Slobin, Patricia Clancy, and Mary Catherine O'Connor, whom I thank for their candor.

2 Slobin's theory, however, is an example of a type of coherent functionalist approach to language acquisition, with particularly rich elaboration of acquisition abilities (Slobin 1985).
What could be functionalist approaches to acquisition? They could (a) account for changes in structural interdependencies; (b) examine how pragmatic factors alter pressure to construct syntactic features; (c) or study how cognitive development and changes in semantic features and configurations affect syntactic development.

Budwig's survey tells us that there has been considerable work on semantic functionalism. However, if we look at the pragmatic aspect of functionalism, we find that in keeping with linguistic traditions, there has been little attention in most child language studies of syntax to more purposive functions of speech than the child's learning to talk about the world in ostension, description, or narration. This limitation may simply be a kind of incompleteness, implying a larger program. The alleged importance and centrality of the propositional function in certain adult situations of language use is neither a necessary nor a sufficient reason to assume the same for all stages of language development, and certainly not to assume the invariance of functional values and relationships throughout development (Silverstein 1985, 214).

2. Panel's pragmatic functionalism.

This functionalist panel has included in its research on the acquisition of syntactic categories a variety of characterizations from three functional levels—semantics, context, and purpose. We can also see from their presentations a display of points of view, both in the history of the field, and in current research. By examining what positions appear to be shared by the speakers on this panel, we can find some core views of this group of pragmatic functionalists.

2.1. Autonomy. The hypothesis of this group is that syntax is not begun as an autonomous system. An autonomous syntax would be governed by different principles that didn't interact with any non-syntactic system. These speakers believe it is a useful heuristic to hypothesize that there are no autonomous, substantive, innate, syntactic universal categories but rather to assume acquisition capacities.

2.2. Acquisition capacities. Some acquisition capacities are especially visible in human learners. These include a great sensitivity to correlations of context with verbal forms. They also include the ability to construct novel formal categories, such as English AUXILIARY, and to generate both obligatory and variable rules about forms both in more restricted and concrete and in relatively abstractly defined contexts. For example, English plurals begin as specific uses of particular words; there is no evidence for any general plural meaning. Later there is a regular plural form with phonemic variants that shows up, weeks later, in two new places—added to phonologically similar nonsense forms, and added to irregulars as in mans (Ervin-Tripp 1971). This productivity implies that the child has constructed something more than a series of single words. This is a second step in development. When verb agreement appears, even for nonsense words, (so we could not assume the verb form is also semantically based) we could with some confidence argue that somewhat formal ‘rules' have constructed by the child. Examples even more apparently removed from semantic control appear in the English auxiliary system. The English auxiliary, unlike other Germanic auxiliary systems, brings in the form do, based on a pro-verb, with the effect of creating broader parallelism in constructions with and without modal auxiliaries. These parallelisms suggest that children have constructed AUXILIARY as a formal category.
That is what is meant here by the beginnings of categories, and their development toward greater abstractness/generality. Another example is the English child's extension of some syntactic features of the originally concrete NOUN to COMPLEMENT CLAUSE, which starts with extremely limited contexts.

There is certainly evidence in many domains of human capacity for constructing symbolic relations, not just in the linguistic but in other domains, and also the capacity to create orderly relations of these symbols. Eventually one might expect some of the architecture using these formal syntactic categories could become more generalized in use. Relatively formal syntactic categories and relations may develop in children's language processing at some point, but these pragmatic functionalists believe that to assume they are there at the beginning is to eviscerate the study of their development.

2.3. **Processing.**
All evidence about language to researchers, whether of understanding, imitation, recall, judgment, and constrained or conversationally situated production, is constrained by sensory, perceptual, motor organization or serial processing factors. Since children's acquisition also relies on memory and understanding, this group presupposes that acquisition also must reflect processing factors.

2.4. **Semantic-pragmatic basis.**
This group asserts that most and perhaps all syntactic categories are built around semantic and pragmatic notions. So important is a pragmatic/semantic nexus to the acquisition of linguistic patterns that learners deprived of such information create it (Ervin-Tripp 1973, 124). Because these pragmatic functionalists have not presupposed the existence of syntactic categories (like SUBJECT), their program includes study of their construction and evolution. This process of change during development cannot be explained in a purely formalist account.

2.5. **Child categories.**
This group makes the proposal that children do not start out with syntactic categories fully formed; some of the categories they develop may be discrepant from those used by the older speakers around them. For this reason there is a focus on discovery procedures and on maximizing natural settings at the first stages, such as talk with peers. Peers are not likely to scaffold speech toward adult forms, so such talk makes evident the child's constructions.

2.6. **Speech data.**
There is a strong emphasis in the research reported here on being accountable for actual language use in ecologically valid contexts, rather than in idealized or artificially constructed contexts of use, or grammaticality judgments in terms of social norms. As a result, these functionalists, like variationists, notice relations in data that can be absent or misrepresented in formalist accounts. Clancy has mentioned informally that the Korean particles traditionally called casemarkers are not merely markers of subject and object in spoken adult discourse. They are infrequent; apparently their presence is pragmatically significant, as in the case of the noun, pronoun, or null selection. According to Lee and Thompson (1989) bare nominals have referents known to both speaker and hearer through shared experience. But absence of a particle might be misconstrued
as a child speech `error'. Omission or distortion of such facts can bias the assessment of the validity of different grammatical models.

2.7. Adult/peer pragmatics.
Those who have taken the time to look at the older speakers in the child's social network in the same way that we examine co-occurrences in the child's speech usually find that the data displayed to children are heavily affected by pragmatic factors. These are often but not always the same as those that appear in the children's speech. It has been known to sociolinguists for a long time that the strongest basis for both child and adult acquisition appears to be what is heard. By mid-childhood the most important source is the peer/reference group of the learner. (That is why so many children of immigrants can talk with their peers but not their parents.) This evidence of actual language use in the child's environment is indispensable. In this view it simply won't do to take a formal model of the adult language or analyses done only from written discourse rather than the features of the oral discourse in which the child is a partner.

2.8. Reorganization.
This group does not presuppose continuity, in the sense that the grammatical system of child must be qualitatively like the adult's. They assume there will be reorganization and reanalysis. A good example of this reanalysis was found by Nancy Budwig in her studies of children who did not have a unitary SUBJECT category in the first person. These children in English-speaking families morphologically separated contexts with high and low agentivity and/or high/low demand for control. Thus both semantic and pragmatic (purpose) contexts affected form. These children used me or my for the high agentivity or high control contexts, I for low (Budwig 1989). This situation is not as extreme as in ergative languages, where linking rules (which are said to lead English-speaking children from AGENT to SUBJECT) would lead speakers of ergative languages to the wrong results. We can also assume that reorganization is necessary in bilingualism; there seems to be no impact whatever of the Spanish null subject option on the speech of child second language learners of English (Ervin-Tripp 1989).

2.9. Grammatical models.
A continuity position is usually associated with a strong view on a correct description of adult grammar, which then provides an a priori model of child grammar. Functionalists have a variety of preferences with respect to grammatical systems that will incorporate the semantic and pragmatic features each regards as essential or, in some versions, as psychologically real. Linguistic theories based on written, adult, or European languages prove inappropriate for speech, children, or languages in other traditions, and require ad hoc constructions such as hidden `logical' categories to make them fit.

3. Review of papers.
If the systematic characterization of the syntax of speech is still problematic, engendering fierce disputes after decades of studies of recorded speech and of work with informants, we can consider the analysis and terminology of situational, pragmatic, and discourse research to be even more in its infancy, especially because videotape has radically altered awareness of context effects on speech. Syntax has been shown in various studies to be affected by activity, participation structure, thematic or propositional structure, (speech) act sequences in exchanges, social features, and internal text relations (e.g. register consistency). For a further explanation of
these levels of pragmatic analysis, see Ervin-Tripp (1993). Little of this work as been done
developmentally, and that leads the panel to ask what, in early stages of acquisition, is the role of
these factors on the acquisition of syntax? Is it merely a modifying or constraining role, or does it
play the major part, along with semantics, in the structuring of syntactic categories?

This group takes as a first hypothesis that there is no level of discourse and no feature of
syntax whose historical or ontogenetic development can be understood without consideration of
pragmatic organization. The empirical papers of members of this panel show discourse relations
to syntax in three quite different syntactic domains. It is commonly thought that pragmatic
effects are most important at the level of organizing clause relations. Matthiessen and Thompson
(1988, 317) claim that clause combining is the grammaticalization of the rhetorical organization
of discourse. But Joan Bybee tells us (this volume) that historically, in the grammaticization of
lexical forms that may eventually become function words or affixes, the role of context becomes
MORE important, not less, as grammaticization continues. Presumably, as lexical meaning
bleaches, context plays a larger role.

Amy Kyratzis has examined the category of CAUSAL CLAUSES. She has shown in her
prior work that causals develop from justifying speech acts, to giving reasons for propositions,
and later to epistemic causals. That is, there is a sequence developmentally in the action for
which causals are employed. Causal clauses do not simply burst forth at one point in full
development, but begin in particular constellations of purpose and activity.

She found that the boys spend more time in negotiations, particularly contentious ones,
and girls spend more time relative to boys in collaborative planning. Adversarial exchanges
promote isolated causals, whereas planning discourse supports connected causals. Since planning
is in part a representational activity, looks a good deal like narratives in a different time frame,
and involves an interest in reasons for their own sake, planning promotes connected, continuous-
tonation causals.

As a result of the relative time spent in negotiation vs. planning, coupled with the forms
promoted in in each discourse context, boys produce more isolated causals. These causal
assertions are cognitively present but not conjoined to form complex syntax. Girls produce more
conjoined causals than boys, giving the effect of richer syntax. Her data thus show a training
effect; since boys have less experience with conjoined causals, when both boys and girls are in
story-telling tasks that elicit embedded causals, the pre-school boys produced them less often
than girls, and some boys produced none at all. This result, which usually would be reported as
an individual correlation rather than a gender-based one, suggests that practice in a facilitative
context in discourse affects the acquisition of complex syntax, if by acquisition we mean ability
to produce syntactic structures in varied settings.

Guo Jian-Sheng's work deals with MODAL AUXILIARIES, a part of the sentence core.
Julie Gerhardt, in a series of studies of English auxiliaries, has shown them to be highly related
to clusters of features of the activity setting (Gee and Savasir 1985; Gerhardt 1991). Indeed her
data argue strongly for such language choices as being not only caused by context but on
occasion as helping construct that context by their indexical features.
Guo's work on Chinese modal auxiliaries reveals changes in the syntactic context of each modal along a regular developmental path. AUXILIARY is not at first a unitary category. These changes provide an especially vivid evidence of contextual effects in that in one modal, there is a shift from a desire or dynamic meaning to a deontic meaning, bringing with it changes in the syntactic features. The syntactic setting of the auxiliary in terms of person shifted too, according to the dynamic, deontic contrast. The deontic modals moved in collocations from zero to first to second person, as their context of use changed during development. What motivated this change was that discourse distribution affected the semantic of the auxiliary. What started as simply a local exchange type, in the context of action, challenge, later changed meaning, with an incorporation of a challenge meaning into the semantics and syntax of the auxiliary.

Clancy brings the idea of PREFERRED ARGUMENT STRUCTURE to Korean. This paper shows that it would make as much sense to talk of object dropping as subject dropping in Korean. Pragmatic prominence (contrast, replies, given/new, absence/presence/) has a major impact on argument form, in Korean adult speech, resulting in a preference for OVERT or LEXICAL transitive objects, which are more likely to be new information than are agents. The children were acquiring the same pattern very early.

Maybe this is what the prodrop parameter setting is about. English speakers must learn three types of patterns—that null object is optional with verbs like eat but not with verbs like put, that verbs allow null subject only in certain contexts (Valian, 1991), and that there are pragmatic conditions (much like those in Korean) for the use of pronouns vs. nouns.

Clancy's analysis is also congruent with Duranti and Ochs' (1989) work on Samoan. They showed a similar pattern: the one-lexical-argument constraint. That lexical argument typically was absolutive NP, subject with intransitive predicate or object with transitive predicates in both adult and child speech. A more complex structure found often in adults indicates agency with a genitive. But there was the added sociocultural feature that adult Samoans use the genitive agent to be indirect, and use the ergative for direct foregrounding of accountable agency, which is dispreferred in Samoa. This function for the genitive is very rare in Samoan children. An analysis that simply examined the genitive form but failed to look for social meanings would miss this difference.

4. Future work

Clancy's study illustrates an important issue about strategic efficiency in research on acquisition. In comparative acquisition work it seems very important to match the languages compared and the problem. This matching may in the first instance involve typology, as in the case of Korean or Samoan. What we really need is comparative analysis of pragmatic/syntactic types—like Bowerman's semantic (space) types, to help us in these strategic choices.

A second basis for such selection may be sociocultural. When Budwig, Wiley, and Quick (1992) began their work on children who had both I and me or my as agent terms, they assumed that parents might be modeling the contrasts they found. Parental modeling is our usual explanation for differences. They did find that adult pragmatics fit the findings half way—that the most frequent use of I by the mothers was with low transitivity verbs in neutral pragmatic contexts. But they could not locate an input difference which would account for the use of me or
my in subject position. In tracing where these children could have gotten such a distinction, they found significant differences between two types of dyads. There was a social focus on the child's agentic power, so one might call the mothers of the my/me users self-esteem builder moms. But there was no difference in the specific use of these pronouns themselves.

The kinds of differences in interaction Choi and Gopnik found between the Korean and American mothers they studied, which they attribute to typology, could as Budwig suggested be interpreted as sociocultural. But of course one would have to separate language and interactional practices to do this study. A natural situation in which this occurs is in those second generation families here who keep their parents' interactional practices but do them in English. Gender contrasts such as Kyratzis found may be good indicators of sociocultural effects. Strategically selected studies both of structural and socio-cultural contrasts seem to be a next step in carrying out a program of work on the relation of syntax to discourse.

When asked to evaluate one set of functionalist studies of acquisition, Silverstein judged them as merely appealing to functional factors as dei ex machina to account for making transitions to successive stages of a child's formal competence' (1991, 147). He identified 'kinds of cognitive skills, and processes of enrichment of those skills (through, e.g. "analogy")' as just a type of functional addition to a formalist paradigm, which takes not only formalist categories more or less as presupposed, but adds others to them.

The panel must assess whether discourse is just one more addition. Another way to proceed in the future is to assemble the new information being gained about the architecture of discourse, and find how syntax is fitted to that structure. We have seen the beginning of that sort of work. The very strong relation found between syntax and activity type tells us there is a lot more to be discovered. Whether or not it turns out that discourse is a major factor in the building of syntax, mapping the development of this complex domain would be an achievement.

References


