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BASIC RELATIONS IN CHILD LANGUAGE AND THE WORD ORDER MYTH *

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The research involved an evaluation of the psychological reality of the syntactic functions of subject and object, the semantic functions of agent and patient, and the discourse functions of given and new. The domain of analysis was from the early two-word into the early three-word phase (approximately 1;7 to 2;5) of the acquisition of the relatively synthetic language of Polish.

An analysis of the inflectional morphology revealed the appropriate use of all seven cases and contrasts within three dimensions of agreement before 1;9. These varied inflectional forms were used with sufficient frequency to argue that the nominative case and the agreement relations are productive subjecthood properties at this phase of development. The semantic function of the subject noun phrase was either an agent or a patient. Hence, case and agreement cannot be reduced to properties of semantic functions.

Since both subject and object were rarely realized simultaneously in the surface structure in the early phase of two word utterances, the set of verb plus subject and verb plus object patterns (i.e., SV, VS, OV, and VO) were analyzed for the discourse functions of given and new. Neither discourse function nor cannonical (SV and VO) form control word order. As both subject and object came to be realized in the surface structure, subject before object priority was revealed as a subjecthood property but not in a rigid word order (i.e., both SVO and SOV patterns occurred). The evidence demonstrates the independent status of the syntactic function of subject.

This research was conducted to determine what the primitive relations of child language are and how they are expressed. In the last two decades, the focus has shifted from the syntactic functions of subject and object (e.g. McNeill 1966) to the semantic functions of agent and patient (e.g. Bowerman 1973) to the discourse functions of given and new (e.g. Schieffelin 1981) or to a combination of pragmatic and

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semantic functions (e.g. Bates and MacWhinney 1979). The developmental sequence from semantic relations to syntactic relations is the most widely proposed (cf. Maratsos 1981; and Gleitman 1981).

Whatever the basic relations chosen during these two decades, the most dominant argument has consistently been that children use word order to express the basic relations because the relations themselves derive from some concept with linear properties and because inflectional means of expression are particularly difficult for children to utilize (e.g. Slobin 1966; Bruner 1975; Radulović 1975; Osgood and Tanz 1977; and Schieffelin 1981). According to Gleitman and Wanner (1982), this argument, which we will identify as the word order myth (Weist 1983a), is part of 'the state of the art'. Gleitman and Wanner add stress as a major factor allowing that stressed inflectional information may get processed; e.g., 'During the period when the unstressed syllables are mostly missing and ill analyzed, the child starts talking more than one word at a time. The evidence is massive that at this point words are sequenced in the sentence' (1982: 21). In contrast to the state of the art position, we will argue that syntactic functions have an independent status during this early phase of multiple word utterances, and that evidence for the word order myth only appears to be massive because of a disproportionate influence of research on the acquisition of English.

Methodology: the children and the corpora

The data from four Polish children who lived in Poznań were included in the study. The children were tape recorded approximately twice a month for 45 minutes in natural caretaker–child interactions. The transcripts were integrated with contextual records. This paper contains the analysis of the following two data sets: (1) Marta (1;7, 1;8, 1;8, & 1;9), Bartosz (1;7, 1;7, 1;8, & 1;8), Wawrzon (2;2, 2;2, 2;4, & 2;5), and Kubuś (2;1, 2;2, 2;2, & 2;3), and (2) Bartosz (1;8 & 1;8, 1;11 & 1;11, and 2;0 & 2;0) and Wawrzon (2;4 & 2;5, 2;8 & 2;9, & 3;0 and 3;0). In the first instance, we wanted to concentrate on two early periods of development, and in the second analysis, we were interested in as broad a range of observations as we could obtain from our data. These data are part of a larger research design (cf. Weist 1983a and b; and Weist, Wysocka, Witkowska-Stadnik, Buczowska and Konieczna 1984).

Subjecthood properties: case and agreement

As children shift from single to multiple word utterances (somewhere around 1;6), they change from a frozen to a productive morphology, i.e., the stem + unanalyzed morpheme pattern becomes stem + analyzed morpheme. When the morphological system is fusional as it is for Polish nouns, the developmental problem is one of learning to replace morphemes according to a specific set of rules (see also Smoczyńska 1986). Hence, children must learn, for example, to replace the nominative suffix – *a* with the accustative suffix ę in the word *dziewczynka* 'girl'. When the morphological system has agglutinative properties, children must learn to add and subtract morphemes as well as replace them, for example, in the Polish verb system the morpheme *ł* [u̯] is added to the past (or infinitive) stem to produce past tense and other morphemes indicating gender, person, and number are added to the past tense morpheme. Since bare stems rarely occur, one of the basic problems is to determine when the inflectional morphemes which are found in the corpus are productive. We used three criteria for productivity: correct usage, moderate frequency, and contrastive usage.

Considering the property of case first, the subject in Polish is typically in the nominative case. Polish has seven cases; nominative (NOM), accustative (ACC), genitive (GEN), dative (DAT), instrumental (INST), locative (LOC), and vocative (VOC). Concerning appropriate usage, we agree with Smoczyńska (1986) that the cases '... are used correctly from the very first moment of emergence ...' Table 1 shows the availability of case categories. In our opinion, it is not possible to identify a single point at which one can say that some component of the case system is productive. Our approach was to identify the age at which four examples have accumulated. The argu-

Table 1
The age at which four examples of a case category have accumulated, or (the age of the first example).

Child	NOM	ACC	GEN	DAT	INST	LOC	VOC
Bartosz	1;7	1;7	1;7	(1;7)	(1;8)	1;8	1;8
Marta	1;7	1;7	1;7	1;8	1;7	1;7	(1;8)
Kubuś	2;1	2;1	2;1	2;1	2;1	2;1	(2;2)
Wawrzon	2;2	2;2	2;2	2;2	2;2	2;2	(2;2)

ment is that the larger the number of cases used correctly the greater the confidence that any single case is productive. Table 1 shows that the younger children used all of the cases correctly at least once and used most of them correctly at least four times during our observation sessions. For Bartosz, locative was late at 1;8, dative was infrequent with fewer than four examples, and instrumental was both late and infrequent. For Marta, the dative was late at 1;8, and vocative was infrequent. In comparison, Zarębina (1964) reported that the dative at 1;8 and the locative at 1;10 were the last two cases to be utilized by the child in her diary study. Hence, nominative, accusative and genitive are early acquisitions and the other four cases emerge within a few months. It can be concluded that Bartosz and Marta were coding one basic relation with the nominative case, and in contrast, a different basic relation was coded with the accusative case.

The second property of subjects which was analyzed was that of agreement. In Polish, verbs agree with the subject in person (first (1), second (2), and third (3)), number (singular (SG) and plural (PL)), and gender (masculine (MASC), feminine (FEM), and neuter (NEUT)) in the singular and virile (VIR) versus nonvirile (NVIR) in the plural.

Table 2
The age at which four examples of an agreement category have accumulated, or (the age of the first example).

	Person and number					
	SG			PL		
Child	1	2	3	1	2	3
Bartosz	1;7	1;8	1;7	1;8	–	1;8
Marta	1;7	1;8	1;7	1;8	–	1;7
Kubus	2;1	2;3	2;1	2;2	(2;3)	2;1
Wawrzon	2;2	2;4	2;2	2;4	–	2;2

	Gender				
	MASC	FEM	NEUT	VIR	NVIR
Bartosz	1;7	1;8	(1;8)	–	–
Marta	1;7	1;7	(1;7)	(1;8)	(1;7)
Kubus	2;1	2;3	2;3	2;2	2;1
Wawrzon	2;2	2;2	2;2	–	2;2

Table 2 shows that agreement in person, number and gender in the singular were attested at 1;8 and only the second person plural and the plural virile versus nonvirile distinctions remained beyond the reach of the youngest children (see Smoczyńska (1986) for a penetrating analysis of these delayed acquisitions).

Syntactic versus semantic functions

As Bowerman (1973) and others correctly argued a decade ago, if the noun with the nominative case and with control over agreement always has the semantic function of agent, there is *no* motivation for postulating the syntactic function of subject in the child's language. Hence, it is necessary to also demonstrate that the noun with subject properties can be either an agent or a patient. Since it is abundantly clear in every child language corpus which has been investigated that subjects are sometimes agents, the problem reduces to one of showing that subjects can be patients as well.

All of the children observed produced process verbs, i.e. one place dynamic predicates with inherent patient functions (see Chafe 1970). The following is an exhaustive list for the younger children and a selected sample for the older children: (1) Bartosz (1;7–1;8) – *chować się* 'to get hidden', *palić się* 'to burn', *uderzyć się* 'to get hit', *kręcić się* 'to turn', *bujać się* 'to get rocked', *napić się* 'to quench one's thirst', *spadać & padać* 'to fall'; 92) Marta (1;7–1;9) – *popętać się* 'to get tangled', *przewrócić się* 'to get knocked over', *wylewać się* 'to pour out', *kwasić się* 'to get sour', *obudzić się* 'to get woken up', *kręcić się* 'to turn', *huśtać się* 'to rock oneself', *spadać* 'to fall'; (3) Wawrzon (2;2–2;5) – *zbić się* 'to get smashed', *złamać się* 'to break', *składać się* 'to fold', *pobrudzić się* 'to get dirty'; and (4) Kubuś (2;1–2;3) – *skończyć się* 'to end', *otworzyć się* 'to open', *odczepić się* 'to unhook', *rozwiązać się* 'to untie'. In addition to these verbs, the children also used stative verbs which identify the state of some patient, e.g. Marta (1;7–1;9) *podobać się* 'to be pleased', *bać się* 'to be frightened' and *nazywać się* 'to be named'. Many of the process verbs are pseudo-reflexives, and they take the enclitic *się*. The verbs listed above all appear to pass Niedzielski's (1976) test for pseudo-reflexives, i.e., *się* cannot be replaced by *siebie*. The children also produce true reflexives such as *golić się* 'to shave' of *bawić się* 'to play'.

Polish children do *not* have a simple semantic mapping rule such as code agents with the nominative case or make verbs agree with the agent. It seems relatively clear that the children are mapping semantic functions onto syntactic functions and that rules for case assignment and agreement operate on the syntactic level. Hence, syntactic functions have an independent status [1] as early as 1;8.

Hyams (1984) has made the same case for children learning Italian between the ages of 1;10 and 2;4. Among other indicators of productive syntactic processes, Hyams analyzed noun–verb and modifier–noun agreement. She observed that, 'the agreement patterns hold across all semantic types' (1984: 59), and in general, she argued for, 'a model of language acquisition in which separate, interacting subcomponents (or modules), i.e. syntax and semantics, develop in parallel.' We agree with Hyams that syntactic development parallels semantic and pragmatic development, and we also suggest that this idea is more consistent with the data than theories which postulate metamorphic changes in a semantic system (cf. Gleitman 1981; and Maratsos 1981).

The role of word order

It is clear from the data presented in tables 1 and 2 that by 1;7 Polish children are paying close attention to inflectional morphemes. [2] However, it remains to be seen if the inflected forms are placed into slots in a rigid word order. Furthermore, if children use word order to express basic relations, what relations are they expressing? Szwedek (1976) has argued that adult Poles use word order to express the discourse functions given (G) and new (N), and the unmarked word order is G–N with sentence stress on the new information. Schieffelin has argued that, 'children use word order pragmatically appropriately before they use grammatical case marking correctly' (1981: 118). Hence, Polish children might use word order to express discourse functions as

[1] See also Lust et al. (1980) versus Greenfield and Dent (1979) for a related argument concerning pragmatics and syntax.

[2] Our analysis of tense and aspect provides further support for this claim (see Weist et al. 1984).

Schieffelin has claimed and not to express syntactic functions as Radulović (1975) has claimed.

The first problem is to define given and new information. While a number of investigators have offered definitions of given and new (e.g. Bates 1976; Chafe 1976; and Clark and Haviland 1977), none of these definitions have a great deal of practical value when it comes to assigning given and new values to the components of utterances in child discourse. Hence, we established a set of decision rules which can be found in the appendix. Our classification system is very objective, e.g. the immediate prior mention of information establishes it as given versus answers to questions introduce new information. We judged that it is impossible to use definitions which would require one to know such abstractions as what the child presumes the listener knows. The fact that patterns with all three components (verb + subject + object) were exceedingly rare for the younger children caused us to restrict our analysis to statements [3] containing a verb (V) and a noun (N) in some arrangement. The following shows the relative proportion of utterances with either a noun, a verb, or a combination: (1) Bartosz (1;7–1;8) N 0.26, V 0.43, V + N 0.27, V + N + N 0.1, and other 0.3; Marta (1;7–1;9) N 0.41, V 0.27, V + N 0.23, V + N + N 0.4, and other 0.5. The set of V + N utterances was classified according to syntactic functions (SV, VS, OV, or VO), discourse functions (GN, NG, NN, or GG) and sentence stress (initial word (I)) or final word (F)). Table 3 shows the results for the two younger and the two older children. The most salient feature of table 3 is the relatively broad spread of the data.

Children do *not* observe rigid word order to express syntactic or discourse functions. However, there are a few developmental trends in the data. The unmarked SV and VO patterns occur more frequently in the older children (75%) than the younger children (47%). The older children were more likely to use sentence final stress with 63% as compared to 25% for the younger children. The younger children produced more NG than GN patterns (with 33 vs 26), but this is only a small numerical advantage not a dominant NG pattern as has been

[3] The data in table 3 contain only verbs in the indicative mood. Utterances with verbs in the imperative mood were analyzed separately. Stress initial VO patterns were the most frequent for the younger children and both stress initial OV and stress final VO patterns were common in the older children. Again there were no salient constraints from discourse context (see also Smoczyńska 1976).

Table 3
Evidence for discourse functions: the total number of two word utterances for two children classified according to given (G) & new (N), subject (S) & direct object (O), and initial (I) & final (F) stress.

Stress	S/O	GN	NG	GG	NN
		Younger children			
I	SV	7	2	6	6
	VS	1	14	1	9
F	SV	6	3	6	6
	VS	0	0	1	4
I	OV	9	5	15	20
	VO	2	7	8	5
F	OV	0	0	1	2
	VO	1	2	3	4
		Older children			
I	SV	4	2	3	3
	VS	0	2	1	0
F	SV	8	0	2	2
	VS	1	1	1	3
I	OV	2	1	2	2
	VO	0	3	0	2
F	OV	0	1	1	0
	VO	1	2	2	18

reported for Italian children (see Bates 1976). Neither sentence stress nor discourse function put major constraints on word order. [4]

Subject before object sequential priority

Polish is basically an SVO language. In the unmarked or neutral sentence pattern, the subject is likely to precede the object. It is almost impossible to evaluate this property of subjects with the data set utilized above, because utterances containing both a subject and an

[4] While a full comparison to Wieman's (1976) study is beyond the scope of this paper, in general, it can be said that we found *trends only* in the direction she predicted. When given was combined with new in an utterance of the form (VS, SV, VO, or OV), there was only about a 60% chance that new information would be stressed. Similarly, there was a tendency to follow a stress hierarchy with the object preferred to the verb and the verb preferred to the subject (unless the subject was supplied for contrast).

Table 4
The number subject verb direct object (O) and subject verb oblique object (OB) utterances.

Child & age	Direct object		Oblique object	
	SVO	SOV	SV OB	S OB V
Bartosz				
1;8	0	0	1	0
1;11	3	1	1	1
2;0	0	0	0	1
Wawrzon				
2;4–2;5	1	0	1	0
2;8–2;9	5	8	9	4
3;0	2	4	1	3

object in the surface structure are rare in the younger children. First of all, the younger children were limited in their capacity to produce multiple word utterances, and secondly, the subject pronoun deletion is very productive (as it is for adults). Because of the range in the available data for these children, we based our analysis on the following observations: Bartosz (1;8 & 1;8, 1;11 & 1;11, 2;0 & 2;0) and Wawrzon (2;4 & 2;5, 2;8 & 2;9, 3;0 &3;0).

We analyzed two types of sentences: (1) transitive sentences with observable subjects and direct objects (0), and (2) sentences with observable subjects and oblique objects (OB) which were frequently locatives or indirect objects. The results are summarized in table 4. Most of the utterances were in one of two patterns; SVO (or SV OB) and SOV (or S OB V). The following sentences exemplify these patterns; (1) Bartosz (1;11) SVO – *Tu ja budujem klocki* 'Here I build blocks', (2) Wawrzon (2;8) SOV – *Pan kółka wycina* '(The) man circles cuts (out)', (3) Wawrzon (2;5) SV OB – *Armstrong trąbi na trąbie* 'Armstrong plays on (the) trumpet', and (4) Bartosz (2;0) S OB V – *Pan na motorze pojechał* '(The) man on the motorcycle went'.

Given the transitive sentence patterns, Bartosz did not produce any reversals and Wawrzon produced only two. Oblique objects are more mobile. While they are readily moved to the initial position, the subject is typically deleted and the overt reversal disappears. We found the following overt reversals: Bartosz at 2;2 produced OB–V–S once and V–OB–S once, and Wawrzon produced the V–OB–S pattern once at 2;8, 2;9, and 3;0. Given and new information content was also evaluated, but there were *no* revealing trends such as the possibility that children might foreground oblique objects expressing new information. Sentences with the verb *mieć* 'to have' were not included in this analysis because the verb is not transitive. However sentences with *mieć* accompanied by observable subjects and objects occur throughout our data and appear to admit to somewhat more flexible word order, e.g. Marta (1;8) *Kitkę ma pani* '(A) ponytail has (the) lady' and Wawrzon (2;2) *Pompon jeden pan ma* 'Pompom one man has'. Again there was no obvious control of word order from discourse context.

The acquisition of Polish versus 'the state of the art'

Children learning Polish use inflectional morphology to express basic relations first and they use word order later. How is it possible for the pattern found in the acquisition of Polish to be exactly the opposite of the pattern investigators such as Gleitman and Wanner (1982) perceive as the state of the art? There are a number of reasons, and the first might be described as limited cross-linguistic perspective. In Wanner and Gleitman's book, Slobin (1982) made the following argument about Finnish, Hungarian, and Turkish: (1) 'Inflections are acquired and used productively before the age of 2;2'; (2) 'There is nothing inaccessible about the notion of marking grammatical relations by noun suffixes'; and (3) 'The ready availability of inflectional morphology allows word order to be used pragmatically' (1982: 152). Since Turkish is an agglutinating and suffixing language which typically places stress on the word final syllable, i.e. on the inflectional morphemes, Gleitman and Wanner tried to explain away the Turkish data with the claim that Turkish morphology is processed because it is stressed. However, their argument does not hold up because both Finnish an Hungarian, which are also agglutinating and suffixing, have word initial stress. Their argument does not apply to Polish either where the stress is on the prefinal syllable. Slobin gave 12 reasons for the rapid acquisition of Turkish morphology and he did not focus on the relative importance of any single factor such as stress.

A second reason for the persistence of the word order myth is misleading claims about the data. Osgood and Tanz have argued that the 'most basic simple cognition' of the human species is the following sequence of ordered concepts: 'actor/instrument–action–recipient/

object' (1977: 537). It follows that SVO word order will be the 'natural' order. [5] The fact that some languages violate the natural order, e.g. Turkish with SOV, creates a problem for which Osgood and Tanz have the following solution: 'One way around this problem would be to demonstrate that, regardless of dominant-order type, in the process of language development in children there is initially a relatively fixed SVO ordering in "sentence" productions' (1977: 540). Given the claims of Radulović (1975), it is not surprising that Osgood and Tanz perceived the acquisition of Serbo-Croatian as consistent with their argument. Radulović claimed that Yugoslavian children 'ignore inflectional morphemes' (1975: 117), and they express syntactic functions by assigning 'word stems or bare forms' (id. 144) 'to slots in a fixed word order' (id. 98). These claims are simply *false.* During the period from 1;8 to 1;10, Ana used 6 of 7 cases and inflected verbs for tense, aspect and mood. While from 2;0 to 2;2, Damir was observed using only 3 of 7 cases, the morphology of his verb system was equally productive. At a time when verb + noun + noun utterances were still infrequent, Damir demonstrated the following variability in the arrangement of verb + noun utterances: SV – 22%, VS – 34%, VO – 26%, and OV – 11%. Like Polish children when Yugoslavian children begin to produce utterances containing a verb, subject, and object, they tend to use the dominant S–O order of their language. The evidence indicates that the dominant word order in the child's language will be the same as the adult's; e.g. SOV in Turkish (Slobin 1982: 152, table 5.4; see also Bowerman 1973: 163, table 14 on Finnish).

A third problem has to do with perservation. Twenty years ago Slobin (1966) reviewed the Russian diary study of Gvozdev's son Zhenya (Gvozdev 1961). While Slobin has changed his position (e.g. Slobin 1982 or 1986), one of his earlier conclusions persists in the literature; i.e., 'the built-in "language acquisition device"...favors begining language with ordered sequences of unmarked classes, regardless of the degree of correspondence of such a system with the input

[5] Yau (1979) claimed that the natural word order is SOV. French children were asked to tell stories about pictures. From about 3;1 to 3;6 the most frequent story telling strategy involved naming the agent, then the patient, and finally commenting on the action, e.g. *un monsieur et une voiture, il pousse la voiture* 'a man and a car, he's pushing the car'. This strategy was, in our opinion, misinterpreted as demonstrating a SOV sequence and supposedly, 'the universal natural order of our species' (1979: 36).

language' (1966: 134 and 135). Slobin's review of Gvozdev's work was quite accurate, but this conclusion was overzealous. Typical of children learning a relatively synthetic language, Zhenya's initial utterances contained frozen forms. Hence, the typical word contains an affix, but there is no evidence of contrastive usage. Gvozdev observed that morphemes started to appear in all grammatical categories between 1;10 and 2;0 (see also Slobin 1966: 136). Just prior to this period at about 1;9 when verbs appeared for the first time, Zhenya placed the verb in the utterance final position (Gvozdev 1961: 407; and Slobin 1966: 134). Given that the length of a child's utterances is quite limited at this stage and that Gvozdev gave only a few examples of this behavior, it is likely that we are discussing a handful of NNV patterns from a single child during a one-month period in the developmental process. Consistent with the data reported above, Zhenya used both SOV and SVO word order during the initial period of productive morphology (at 1;11 for Zhenya). Other variations were also found such as verb initial sentences with the verb 'to give'. During the phase of acquisition which provides the initial evidence for syntactic functions, word order was flexible.

The status of subject

We agree with Maratsos and Chalkley (1980: 161) that the child's concept of subject begins with a limited set of properties which expand as the child constructs a grammar. Thus, agreement and case specification become properties of the concept for Polish children between 1;6 and 2;0 and control of Equi-deletion is a property of subject for Chinese children between 2;6 and 3;0 (Chien 1983). However, we disagree with Maratsos and Chalkley regarding the dynamics of the acquisition process and we reject the proposal that the concept of subject is, 'our summary for a complex of correlated relational term-argument uses' (1980: 175). According to Maratsos and Chalkley the basic unit of learning is the 'semantic-distributional pattern.' First of all, the distributional part specifies a 'sequential loci or slot' for some lexical term plus a morphological environment; e.g., (... *X* + ed...) is a distributional pattern for English verbs. Secondly, the semantic part defines the concept or relation coded by the morpheme; e.g. 'past occurrence of the meaning denoted by *X*' (id. 191). They appear to be arguing that children memorize bare stems which they fit into slots in surface structure patterns (see id. 135) and that slot and filler patterns become stored if frequently experienced (see id. 192). No explanation was given for the perceptual processing of inflectional morphemes nor the acquisition of their meaning.

There is *no* phase in the acquisition of Polish to which this argument applies. Polish children seldom ever experience bare stems, [6] and therefore any concept of a slot would have to be an abstraction constructed by the child. Surface distributional patterns are ambiguous at best. The pattern (X + past morpheme) is the distributional pattern for the verb form class, and (argument + relational term + past morpheme) is a distributional pattern for the syntactic function subject. When the subject is deleted (as it often is) and children experience the pattern ($\emptyset$ + relational term + past morpheme), they must deduce the subject from the remaining inflectional morphology, i.e. gender, number, and person (in addition to the discourse context).

Rather than storing frequently experienced slot and filler patterns, children are constructing a grammar. In order to understand the nature of this grammar, we need to know the principles which govern the processing of information (e.g. Slobin 1986), and the form of the rule system which is constructed. There are a number of potentially useful hypotheses about the latter, e.g. transformational grammar (Chomsky 1981), relational grammar (Perlmutter and Postal 1974), or lexical-functional grammar (Kaplan and Bresnan 1982). Syntactic functions are defined quite deferently in these theories; as phrase structure configurations, arcs in the initial stratum, or functional primitives. The most persistent argument has been that the child's concept of subject is configurational, e.g. McNeill (1966) and Chien (1983).

In our opinion, the idea that syntactic functions are configurational has both contributed to the word order myth and inhibited the discovery of the child's early utilization of syntactic functions. As part of McNeill's idea that children are 'talking base strings directly' (1966: 51), he proposed that the language acquisition device '...is committed to the NP + Pred P format for sentences, and within this limit there are only two possible orders of constituents: (NP + Pred P) and (Pred

[6] It could be argued that some baby talk words such as *am* 'to eat or some kind of food' constitute bare stems.

P + NP)' (id. 49). Hence, children are genetically predisposed to utilize basic relations with linear properties according to this line of argument. Bowerman (1973) disconfirmed McNeill's arguments for syntactic categories and dominance relations and turned to a semantically based theory. However, Bowerman could have adopted another conceptualization of syntactic functions instead. [7]

At the point in the acquisition of Polish when it is clear that case and agreement are productive components of the children's language, there is very little evidence for categories such as NP and VP or phrase structure rules. At the same time, there is good evidence for a significant lexical development. [8] This state of affairs is compatible with the form of lexical-functional theory where syntactic function–argument correspondences are specified in lexical representations and where arguments are unordered. However, like transformational grammar, lexical-functional theory does not provide an explanation for the acquisition of either lexical representations or the concept of subject.

The purpose of this research was to discover the basic relations of child language and to determine how they are coded. We have argued that syntactic functions have an independent status, and there is no evidence that syntactic functions grow out of semantic functions. The child's concept of subject is different from the adult's concept. The child's concept has a limited set of properties such as case specification, agreement, and subject pronoun deletion between 1;6 and 2;0. The acquisition of the concept of subject is accompanied by the acquisition of lexical representations. Among other distinctions (see Smoczyńska 1986), Polish children discriminate action verbs from process verbs, and the correspondence between arguments and syntactic functions is influenced by this lexical development such that agents surface as subjects with action verbs and patients with process verbs. Hence, even at this early age, children are involved in reasonably complex information processing, and they are *not* simply putting semantic concepts into fixed order frames.

[7] Bowerman (1973) was somewhat restricted in her analysis by the fact that the children she was studying did not demonstrate the Finnish child's more typically precocious utilization of subject–verb agreement (cf. Toivainen and Toivainen 1985).

[8] In English, there is also good experimental evidence for rapid lexical development in the verb system (Weist 1982).

Appendix

Rules for establishing given (G)

(1) Prior mention

A component of an utterance (an expression or term) is given if it was mentioned either by the child or the adult within a few turns before the child uses the expression in his/her own utterance. The topic of the discourse segment must remain the same.

Mother: Tu pani ma zielone.
Here the lady has a green (thing).
Bartosz: Pali się zielone (G).
The green (thing) is on.

(2) Non-verbal foregrounding

A component of the immediate perceptual environment can be established as given if the child brings this component into the foreground with some nonlinguistic behavior that constitutes an ostensive, 'There is X here/there' (looking at, holding, reaching for, offering, pointing at, touching). When this entity (X) is now mentioned in an utterance by the child, it is considered to be given.

Context: Bartosz is pointing to the tape recorder.
Bartosz: Lala (G) chcę.
I want lala.
Note: Lala – Bartosz's word for tape recorder.

(3) Main participants in a discourse

Names of the child's interlocutors are considered to be given.

Bartosz: Tatuś (G) wyszedł.
Daddy left.

(4) Repetition

The repeated part or all of the prior adult utterance which was an adult acknowledgment (also in a form of a question) of the child's prior utterance.

Bartosz: Wona. Wona puka.
Wona is knocking.

Father: Wona puka?
Wona is knocking?
Bartosz: Wona (G) puka (G).
Wona is knocking.

(5) Persistent reference

If the child persistently refers to some object or action, no matter if it is before or after a change of topic, this persistent reference is considered to be given.

Wawrzon: Do Bazia ściałem iść.
I wanted to go to Bazio.
Mother: Ale Bazio teraz śpi.
But Bazio is sleeping now.
Wawrzon: Do Bazia (G) ściałem (G) iść (G).
I wanted to go to Bazio.

The same utterance appears next after 12 turns, then 4 turns, then 3, and then after 5 turns.

Rules for establishing new (N)

(1) Spontaneous introduction

A component of an utterance (or a whole utterance) is new if it is introduced spontaneously into the discourse by the child or if it is spontaneously reintroduced after a change in topic.

Context: Bartosz comes up to the experimenter.
Bartosz: Wody (N) cie (N).
I want some water.

(2) Response to a question

Informative parts of responses to questions provide new information.

Bartosz: Pojechał.
He went.
Experimenter: Kto pojechał?
Who went?
Bartosz: Tatuś (N) pojechał.
Daddy went.

(3) Contrastive information

Added information that is opposed to an aspect of the previous utterance or an aspect of the situation is new.

Grandmother: Nie mogę tam iść bo boję się tego psa.
I can't go there because I'm afraid of that dog.
Wawrzon: Z ciocią (N) pójdę.
I will go with Auntie.

(4) Denial, negation, disagreement

If the child's utterance constitutes a negation or denial of the adult's utterance or a disagreement, it is new.

Wawrzon: Nie daje matofona. Matofon daj (N).
She is not giving me the tape recorder. Give me the tape recorder.

(5) Clarification

If the adult does not hear the child's utterance and asks for repetition or if the child asks for clarification, the repeated utterance is considered to be new. Also if the adult misunderstands the child's utterance, the repetition of that utterance is new.

Bartosz: Pacze Matusia.
Martusia is crying.
Father: Co? Co zrobiła mamusia?
What? What did Mommy do?
Bartosz: Pacze (N) Matusia (N).
Martusia is crying.

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Cette recherche est basée sur l'évaluation de la réalité psychologique des fonctions syntaxiques du sujet et de l'objet, des fonctions sémantiques de l'agent et du patient, et des fonctions discursives du donné et du nouveau. Le champ de l'analyse se situe du début de la construction de phrases à deux mots (environ 1;7 ans) au début de la construction de phrases à trois mots (environ 2;5 ans) pour l'acquisition d'une langue relativement synthétique, le polonais.

L'analyse de la morphologie inflexionnelle révèle l'utilisation appropriée de sept cas et contrastes à l'intérieur des trois dimensions d'accord avant l'âge de 1;9 ans. Les formes inflexionnelles ont été utilisées avec suffisamment de fréquence pour assurer que le cas normatif et les relations d'accord sont des propriétés intrinsèques à ce stade-ci du développement. La fonction sémantique de la phrase nom-phrase était soit agent, soit patient. Cas et accord ne peuvent donc pas être réduits à des propriétés de fonctions sémantiques.

Puisque et le sujet et l'objet ont rarement été réalisés simultanément dans la structure de surface lors de la première phase des expressions à deux mots, l'ensemble des modèles verbe plus sujet et verbe plus objet (SV, VS, OV et VO) a été analysé pour les fonctions données et nouvelles. Ni la fonction discursive, ni la fonction cannonique (SV et VO) ne controle l'ordre des mots. Comme et le sujet et l'objet ont été réalisés à la structure de surface, la priorité sujet par rapport à l'objet s'est révélée comme propriété intrinsèque mais pas dans un ordre rigide des mots (SVO et SOV se sont produits). L'évidence démontre le statut indépendant de la fonction syntaxique du sujet.