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Speech patterns in the emerging grammar

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SPEECH PATTERNS IN THE EMERGING GRAMMAR

It is commonly acknowledged that the acquistion of language is embedded in contexts of biology, cognition and social interaction. Linguistic ontogenesis is, as persuasively demonstrated by D. I. Slobin in his paper on the conference *"Language Acquisition: State of the Art"* held at the University of Pensylvannia in 1978 — more than the unfolding of an innate potential or mapping of sensori-motor schemas onto speech patterns, or the symbolic crystalization of social interaction. Language reflects the structures of biology, cognition and discourse in its own way and these must be discovered by the child. The apriorism of Chomsky has stimulated a search for non-linguistic roots of language development. Although necessary for a full picture, this endeavour can lead to an apriorism of its own, an apriorism which attributes the essentials of linguistic structure to the child before he has begun to master the grammar of his native language.

This new apriorism is based on claims of *"naturalness"* in the means used by human languages to map underlying semantic and pragmatic content onto surface utterances. It is indisputable that the child is — in acquiring the grammar of his native language — supported by the facts that the system was involved by minds like his own, in adaptation to human situations and that linguistic cognitive and social development obviously prepares the child for mastering his mother tongue. None of these facts, however, provides him with the key to the particular categories and structures of that language. The naturalness argument, as applied to child language, has two facets:

— the claim that word order is a natural reflection of the order of thoughts and

— the claim that semantic categories are given in cognition, arising from sensori-motor intelligence and mother-child interaction.

Let us consider the first facet of the naturalness argument, namely the claim that word order reflects the order of child thinking.

There are — a shown by D. I. Slobin at the above mentioned conference — at least three major approaches to the word order argument, coming from researchers who, until recently, represented quite different psycholinguistic positions. All three of them make predictions about both word orders in

early speech and the relative ease of acquisition of different types of langua-
ges — predictions which are not supported by cross-linguistic developmental
data. J. Bruner, e.g., (1975, p. 17) bases his theory of word order on the same
grounds as his theory of semantic categories, namely, mother-child inter-
action. The argument has been that the structures of action provide bench-
-marks for interpreting the order rules in initial grammar; that a concept
of *agent-action-object-recipient* at the prelinguistic level aids the child in grasping
the linguistic meaning of appropriately ordered utterances involving such
case categories as *agentive, action, object, indirect object* and so forth. Two
conclusions may be drawn from Bruner's theory;
first: early speech should follow the above mentioned word order, i.e. agent-
-action-object-recipient:
second: languages which do not adhere to this word order in their basic form,
or those languages which present the child with a variety of word orders,
should be more difficult to acquire. Neither of these implications is, however,
supported by developmental psycholinguistic evidence.

D. McNeill (1975, p. 367) explains intrinsic sequences of words in the
child on the ground of his mental processess. Thus *"an agent"* precedes *"an
action"* or *"an object"* because the child experiences his own intention to act
before the act is carried out. In view of this theory, a number of specific word
order predictions are made, favouring the acquisition of SVO and SOV lan-
guages and dis-allowing early word orders which are not consonant with
intrinsic sequences.

C. E. Osgood and J. K. Bock (1977) base their theory for natural word
order on perception. On this argument, *"agents"* occur first in sentences
because animate, human and moving beings most readily attract attention.
In the collective study with C. Tanz (1977, p. 540) Osgood then presents the
idea that regardless of dominant order type, in the process of language de-
velopment in children there is initially a relatively fixed SVO ordering in
sentence productions.

Let us test the above mentioned theories on the behaviour of Czech speaking
children.
Czech, as other Slavic languages, is of synthetic character with highly de-
veloped inflections and relatively high flexibility of word order. Viewed from
the point that inflections play a fundamental role in adult grammar, one
would expect its early emergence in children, mastering Czech as their mother
tongue. And yet, our research has shown that the very young speaker of
Czech does not make use of the morphological device and sticks, on the other
other hand, to what has been referred to as basic word order, namely *"agent"*—
—*"verb"*—*"object"*. This suggests that the child starts with unmarked classes
even in highly inflected languages. To the extent that order in early child
language differs from that of mature language implies probability that the
former represents a fundamental order of semantic representation while
inflections are to be considered as secondary elements appearing later at
more advanced developmental stages. There are many examples to illustrate
the word order *agent-action* or *agent-action-object* in any Czech child, cf. *"auto
jede"* (= a car goes), *"Jiříček hapal"* (= Georgie fell), *"Evička papá polívečku"*
(= Eve eats her soup); what is rather surprising is the fact that the same
array is maintained by the child even in questions, where — in adult langua-

ge — inversion is optional, cf. the child's *"auto jede"*? with the standard *"jede auto"*? In a combination of two nouns, the first is always the subject in the period when the child does not use case marking and omits prepositions, cf. *"miminko kočárek"* (=the baby the pram) instead of the proper *"miminko je v kočárku"* (= the baby is in the pram). Sooner or later, the child starts marking the object with case-endings. And here we have an interesting observation: with the gradual establishment of case-inflectional system to mark the semantic role of nouns in children, the word order looses the significant semantic function which it played at the earliest developmental stage. The naturalness hypothesis overemphasizes the use of speech to convey semantic proposition. The child, nevertheless, may take different perspectives on the events he communicates, focussing and labelling various aspects of the observed reality in various sequence, cf. the following example: *"botičky miminko má bambulkama hezký"*, i.e. *object-subject-verb-indirect attribute*, instead of the proper sequence *"miminko má hezký botičky s bambulkama"* (= the baby has nice little shoes with tassels). Though non-grammatical, the sentence does not loose the sense and the child is satisfied that his communication has been accepted and understood. The next example which also seemingly violates the basic word order, cf. *"moje tatínek nepůjčím"* (= my daddy I shan't let) illustrates the child's focusing now on one aspect, i.e. his father, now on another aspect of the event, i.e. his intention to have his Daddy just for himself. Using telegraphic and highly emotional speech, the child communicates two realities, namely, *"This is my Daddy"* and *"I shan't let anybody have him"* rather than simple announcement *"I"* (= tacit subject) + *"shan't let"* (= action) + *"my Daddy"* (= object).

Now let us deal with the second facet of the naturalness argument, i.e. the claim that semantic categories are given in cognition, arising from sensori-motor intelligence and mother-child interaction.

The categorization argument has an older history and was already objected to by L. Bloom, cf. her 1973 monograph, p. 137. She proposes, undoubtedly correctly, that describing relationships within the situation in which the child speaks is different from attributing to the child the linguistic knowledge for talking about such relationships.

The issue is one of whether the categories used in linguistic description are the same as those used in cognizing the extra-linguistic reality. This position has been taken by a number of students in child language acquisition. Here are the opinions of some of them:

R. Brown (1973, p. 200) takes for granted that sentences, at the earliest stage of development, express the construction of reality which is the terminal achievement of sensori-motor intelligence. What has been acquired on the plane of motor intelligence (the permanence of form and substance of immediate objects) and the structure of immediate space and time does not need to be formed all over again on the plane of representation. Representation starts with just those meanings that are most available to it, propositions about actions, schemes involving agents and objects, assertions of non-existence, recurrence, location, and so on. Our data such as *"miminko pláče"* (= the baby cries), *"půjdeme hajat"* (= we shall go to bed), *"holčička má balonek"* (= the girl has a ball), *"táta šel pá"* (= Daddy went away), *"panenka je v kočárku"* (= the doll is in the pram) etc. bring confirmation to Brown's

conclusions. But representation carries intelligence beyond the sensori-motor level. It is a new level of operation which quickly moves to meanings that go beyond immediate space and practical action. It is commonly known that the earliest representations begin as imitated activities. When the child plays at *"drinking milk"* or *"waving bye bye"* this is its form of representing those activities. After representations as such became internalized they can form the basis of insightful behaviour which anticipates the result of an action and enables the child to act with forsight. J. Piaget (1972, p. 23) has the following example: his daughter, at the age of 20 months, came to a door with some blades of grass, put them in front of the door, then, seeming to forsee that in pulling the door towards her she would crush the flowers under it, she bent down, picked them up and moved them back a foot or two before opening the door. Another child would have to go through the whole procedure in a trial and error fashion and would not have perceived the mistake until the evidence of the result of this action was before him. There are further important features of the symbolic function which obviously have implications for language learning. L. S. Vygotsky (1962, p. 70) has this observation: when asked if a dog whose name is Bull had horns, the child replied that it must have horns if it is called Bull. The reaction like this reveals that the child knows nothing about the arbitrariness of the relationship between words and their referents. This example of course concerns meanings and not grammatical relations. The two are, nevertheless, easily confused because terms like agent and object must have been used for both. The formal relations which express semantic relations which express semantic relations are peculiarly linguistic and have, in all probability, nothing to do with sensori-motor intelligence.

J. Bruner (1975, p. 6) seeks to derive Fillmorean case categories from the structure of interaction: what is universal is the structure of human action in infancy which corresponds to the structure of universal case categories. It is the infant's success in achieving joint action that virtually leads him into the language.

J. M. Schlesinger, in dealing with the problems of meaning categories (1977, p. 155) points out that — beyond cognitive skill of interpretation — language learning depends in addition on a categorization of objects and events which is needed solely for the purpose of production and reception of speech.

Putting together the above mentioned cognitively and perceptually based theories, the task of discovering the grammar of one's language amounts to scanning the input for the terms which express categories such as *agent, action, object* in their proper forms and learning the order of expressing these terms in the language. Taking into consideration that "unnatural" or varying word order retards the acquisition and so do inflections, English — as an analytic language with fixed word order — is an ideal language for easy acquisition while Czech, where the proper selection of case endings interacts with gender, number and animacy, not to mention irregularities within these grammatical categories, alongside with relatively flexible word order — is the very opposite, i.e. the representative of languages which are difficult to acquire. In the remainder of our paper we shall attempt to show the linguistic competence in an English and a Czech child which is reflected in the communication of a simple sentence such as:

"Daddy threw the ball" = *"Táta hodil balon"*.
The task for the English and Czech child seems reasonably straightforward, and well in line with cognitively based models of acquisition. It appears that both children have simply to express the appropriate terms in the proper order, which, at least as far as this example is concerned — in both languages fulfils the demand of naturalness, namely the sequence *agent-action-object*. The single difference between the English and Czech representation seems to be the non-existence of article in Czech. Closer insight, however, reveal that the task which both the children have to tackle is far more complicated. Slobin (1978, p. 4) calls attention to the fact that the English child must learn to recognize whether the object was definite or indefinite, to indicate definiteness or indefiniteness by the definite or indefinite article that precedes the object name and must also have some knowledge as to why not indicate other facts which are obvious, such as the sex of the agent or the fact that the action has just taken place. And what of other facts which are probably not used for grammatical purposes in any language? For example, that the ball was thrown on a sunny afternoon at the riverside, or that the child was pleased with the way his father threw the ball, and so forth. It is evident that there are many things that could be said about this situation — even things that the very child may have attended to and wished to communicate — but that English grammar requires only that the basic elements be named, in a given order, with indication that the action was in the past, the object definite and the agent in focus. The Czech grammar wants more, cf. the Czech equivalent of the English example namely, *"táta hodil balon"* where, following facts call for optional grammatical coding. As far as the v e r b is concerned, the Czech child must learn to distinguish between those grammatical features which are determined by the sentence context, i.e. the n u m b e r (which follows from the grammatical concord) and the p e r s o n (determined also by the subject of the sentence), as well those features which are independent of the sentence context, i.e. the v e r b a l tense and v e r b a l aspect, cf. the fact that the verb form *"hodil"* indicates n u m b e r (i.e. singular form *"hodil"* as against the plural form *"hodili"*, p e r s o n (i.e. 3rd person form *"hodil"* as against the 1st person form *"hodil jsem"*), g e n d e r (i.e. *"hodil"* = = masculine form as against the feminine form *"hodila"* or neutre form *"hodilo"*, v e r b a l tense (*"hodil"* = past tense as against *"hází"* = present tense or *"hodí"* = future tense), and, finally, v e r b a l aspect (*"hodil"* = perfective form as against imperfective form *"házel"*). As for the two n o u n s in the quoted example, i.e. *"táta"* and *"balon"*, in producing their proper form and optional relation to the verb the child shows that he has already mastered the fact that the noun could be of m a s c u l i n e g e n d e r even when having the ending -a (which is, at early stages, an indication for feminine gender) as well as knowledge of the demand to decline i n a n i m a t e m a s c u l i n e n o u n s after the paradigm *"hrad"*, i.e. with zero ending in the accusative form as against the obligatory a-ending in a n i m a t e m a s c u l i n e n o u n s. In addition, he must also be aware of the appropriate size of the ball, as he did not use the d i m i n u t i v e form *"balonek"* as well as of the fact that there is just one ball in play and therefore it is not necessary to look for elements of deixes such as the d e m o n s t r a t i v e p r o n o u n, viz. *"this ball"* or p o s s e s s i v e p r o n o u n, viz. *"my ball"*, or p o s s e s i v e a d j e c t i v e, viz. *"the father's ball"* nor to distin-

guish in terms of a category of **proximity** versus **remoteness**, i.e. *"this ball"*, versus *"that ball"*. Last but not least, he must realize that **word order** is not unchangeable as the communication of who-did-what-to-whom is not expressed by it, cf. the fact that rearrangement such as *"balon hodil táta"* indicates but the shift of the stress from the agent to the object, the meaning of the sentence, however, remains identical. The variation of word order is here possible because one of the nouns, namely the **animate subject**, is of the sort which has a distinctive **accusative** inflection, cf. *"tátu"* as against the **nominative** form *"táta"*.

In what has been said above we have attempted to show that — in analyzing the child's utterances — one has to differentiate between a communicative intention which is, no doubt, present in basic form even at the one-word stage and the semantic structure containing the particular array of notions which must be mapped onto a grammatical utterance in a specific language. Czech, the entire set of case inflectional paradigms, hard and soft, with seven cases, three genders, animacy and number is a vast and confused system. In mastering it, the child procedes step by step, from un-marked features to marked ones, from simple to complex phenomena. In accordance with his linguistic competence at the given stage of language development, he creates his own simplified language system on the base of wha the borrows from the system of adults. Thus the **word order** is the sole and essential means of the sentence interpretation at the earliest stages where a clear and reliable **inflectional system** is absent. Varying word order comes with the usage of multi-word utterances and with full mastery of inflections. In between is the stage where the child requires that word order and inflections support each other redundantly.

The emergence of inflections presupposes, however, as correctly pointed out by D. I. Slobin (1973, p. 192) at least one basic operating principle, namely, that phonological forms of naming units may be systematically modified. There are numerous indications reported in child-language literature revealing that long before the child acknowledges the role of change as a grammatical rule he comes to be aware of the fact that the words can be altered in order to reach a change in qualification or emotional evaluation within the word and therefore adopts various forms which enable him to achieve the desired situation. Werner and Kaplan, reviewing the European diary literature, cite many examples of playful reduplication, suffixing and so forth (1963, p. 155). Cross-linguistic studies have confirmed that it is the end of the word with which the child starts experimenting by adding various suffixes, thus showing that it is this part of the word which he takes to be the bearer of the function. In Czech — and the same seems to hold good about languages which provide **inflectional diminutive** or **affectionate forms** (cf. D. I. Slobin, 1973, p. 192, footnote 2) — such inflections are among the first to emerge. Next come, according to our observation, the usage of affixes -difference in **number** in nouns and verbs, followed by mastering the differences in **gender**, **case** and **animacy** *in nouns*, **tense**, **person**, **mood** and **verbal aspect** *in verbs*. Their function is roughly analogous to that of adult language, their frequency and — in many respects multiplied applicability — is far higher in the child.

Many of the early inflections being unconventional in the sense that they

have no equivalent in the adult speech bring first evidence that the child's grammar is generated, not imitated. From the finite elements and rules before him the child creates his own grammar, through trial and error. The faulty constructions are the best positive indications that the child has assimilated the system, internalized the rules and has started generating constructions independently from the adult system. His first rules are derived and applied with broadest generalization and greatest distribution on the one hand while inferring from particulars and exceptional forms on the other hand. Examples of analogous formations and over-extensions of regular rules might be found within any of the inflected category. Let us mention here at least the fact that — at early developmental stages — the child resorts to regular declension in *substantives* and *adjectives*, regular conjugation in *verbs* and regular comparison in *adjectives* and *adverbs* while irregularities in any form or any word order are, as less productive phenomena, ignored. The high degree of grammaticality is the next outstanding aspect of the early developmental stages. Having discovered part of his language, the child behaves as if he expects a certain consistency or generality to his findings. Hence the explanation, why the child — for a certain period — ranks all nouns with consonant endings as masculines (cf. e.g. the child's constructions such as *"bílý sůl"* (= white salt) instead of the proper *"bílá sůl"*, *"ten saň uletěl"* (= the drake went away) instead of *"ta saň uletěla"* and so on. Reversely, the masculines with a-ending are treated as feminines, cf. e.g. *"moje táta"* (= my Daddy) instead of the proper *"můj táta"*, or *"děda kouřila"* (= grandfather smoked) instead of the proper *"děda kouřil"* and so forth.

The tendency towards grammaticality is placidly illustrated in the child's predilection for diminutives, i.e. the onomaziological category which brings into actuality the demands of this principle almost unexceptionally, cf. the unification of the suffixes with -k- marker, viz. -ek, -ka, -ko, the lucid categorization as for gender, viz. -k for masculines, -a for feminines, -o for neutres), plural (the suffix -i for all nouns regardless the gender (cf. *"chlapečci"*, *"holčičky"*, *"očičky"*), non differentiating between hard versus soft paradigms (all diminutives decline after hard paradigms) and so forth. Hence follows also the primacy in the usage of phonologically unique forms endowed with acoustically salient endings as compared to forms which are either homonymous or marked by zero ending. These are, in all probability, the most important operating principles that lead the child in the process of language acquisition, however complicated its grammatical system may be. He has means for restricting, as well as organizing the flow of incoming linguistic data; he filters out those kinds of input which are as yet inaccessible for him while selectively listening for others which coincide with his linguistic competence. And while there can be disagreement about the extent to which the acquisition process requires an innate linguistic faculty, there can be no doubt that the process requires highly structured and active child's mind.

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K OTÁZCE OSVOJOVÁNÍ GRAMATIKY U DĚTÍ

Autorka se ve svém příspěvku zamýšlí nad otázkou vývoje gramatického systému u českého dítěte. Podrobuje kritickému rozboru teorie, které v procesu osvojování gramatiky prosazují jako zásadní dvě teze, a to:
— slovosled podmět + sloveso vyjadřující činnost + předmět je přirozený a tudíž základní pořádek slov, protože obráží dětský způsob myšlení;
— jazyky, v jejichž systémech je slovní pořádek jiný, stejně jako jazyky, které mají slovosled variabilní, jsou osvojovány — jako gramaticky náročnější — pomaleji. Na základě svých výzkumů dětí osvojujících si češtinu a v konfrontaci s výsledky výzkumu v oblasti vývojové psycholingvistiky autorka tyto teze zamítá. Ukazuje, že stejně jako v plánu fonologickém, tak i v plánu gramatickém probíhá jazykový vývoj od bezpříznakového k příznakovému, od jednoduchého k diferencovanému. Slovosled je jediným relevantním prostředkem k vyjádření funkce toho kterého slova v nejranějším údobí, jehož dominantním rysem je neexistence flexe. Odtud fixní pozice jednotlivých slov i v jazycích typu syntetického, viz češtiny. S postupným osvojováním flexe pak slovosled svou distinktivní funkci ztrácí a releventními nositeli gramatických i sémantických vztahů se stávají flektivní koncovky. Variabilní slovosled vstupuje do jazykového systému dítěte teprve tehdy, kdy již aktivně ovládá náležité flektivní tvary.

Přes značnou náročnost, jež je dána složitostí flektivního systému češtiny, dítě zvládá jeho osvojení bez zvláštních potíží a v časových dimensích stanovených vývojovou psycholingvistikou (tj. v období předškolního věku). Při pokusu vysvětlit jak vlastní proces osvojování gramatiky tak aspekt funkčně strukturní vyplývá vysoký stupeň gramatikalizace, jež se uplatňuje ve větší nebo menší míře u každého dítěte. Ta se projevuje především v regularizaci slovotvorných prostředků, kdy dítě využívá pouze flektivní koncovky vysoce produktivních vzorů, zatímco koncovky s nízkou produktivitou, stejně jako veškeré nepravidelnosti uvnitř jednotlivých gramatických kategorií, prostě ignoruje; jinými slovy, vybírá si z jazykového systému dospělých a organizuje svým vlastním způsobem jen to, co odpovídá jeho jazykové kompetenci v daném vývojovém stadiu. Postupně — se vzrůstající lingvistickou kompetencí — tento svůj zjednodušený gramatický systém obohacuje — až k jeho konečné konvergenci se systémem dospělých.