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## A NEW STUDY ON THE ONTOGENESIS OF GRAMMAR

To construct a grammar of any language the child must be able 1) to cognize the physical and social events which are encoded in the language; 2) to process, organize and store linguistic information. In other words, the cognitive prerequisites for the development of grammar relate to both the meaning and the forms of utterances. D. I. Slobin of the Department of Psychology, University of California, Berkeley tries to explore these cognitive prerequisites in the light of cross-linguistic comparison of the ontogenesis of grammar in his paper, read on A Survey of Linguistic Science in conjunction with the Fifth Meeting of the Southeastern Conference on Linguistics (SECOL V), organized by W. O. Dingwall, University of Maryland, in May 1971.<sup>1</sup> Lets review his paper here and compare his results with those observed in Czech-speaking children.

Contrary to the past decade when the main interest of the developmental psycholinguistics was the study of how children acquire their mother-tongue, the present decade promises to place their findings in broader perspective. The workers in this field begin to reach out to other language communities in order to study children acquiring other native languages and in order to make contact with the findings of foreign colleagues and to relate their work to the psychology of perceptual and cognitive development. Developmental psycholinguistics is thus moving from particularism to universalism in two significant ways: from the particularism of the language in question to the acquisition of language in general and from the particularism of linguistic development to cognitive development in general. In cross-linguistic comparison D. I. Slobin hopes to find similar developmental processes in different sorts of languages. At present, he has data on 30 languages from about 10 families. His major concern is to tack the question as to whether there are common orders of acquisition of different linguistic features across languages. Many of his expectations are supported in the pedolinguistic literature. Thus the earliest grammatical markers to appear in child speech express, as a rule, the most basic notions available to the child's mind. E. g. vocative inflection is typically one of the earliest markers in the languages which provide a vocative inflection (cf. Hungarian, Serbocroatian, Polish, Czech). One of the earliest semantic relations to be formally marked in the child speech is that of verb—object. In order languages (English) this relation is marked by consistent word-order. In every language, for which relevant data are available, there is an early form of negation in which a negative particle is affixed to a simple sentence. In languages as diverse as English,

Arabic, Czech, Latvian, Japanese, Samoan, early yes-no questions are formed by rising intonation. Numerous findings such as these offer support for the notion that the first linguistic forms to appear in child speech will be those which express meanings consistent with the child's level of cognitive development. There are, however, some exceptions to this rule. Thus M. Omar<sup>2</sup> reports that the noun plural is the most difficult and latest aspect of the language structure to be mastered by Arabic children. The reason apparently lies in the extreme complexity of plural marking in Arabic.—Another discrepancy might be found in M. Bowerman's dissertation on Finnish acquisition.<sup>3</sup> Her data show that little Finnish children do not ask yes-no questions in any formally marked way. This observation is no doubt due to the fact that yes-no questions in adult Finnish are not formed by rising intonation but by attachment of a question particle to the word questioned and movement of that word to the front of the sentence.—These examples show that although one can talk about order of acquisition in terms of semantic or cognitive complexity, there is clearly a point at which formal linguistic complexity also plays a role. The order of linguistic devices reveals the strategies used by the child in arriving at the grammar of his language. The studies of child speech—those dealing with bilingual children being the most valuable—yield stimulating suggestions as to what sort of formal devices may be simpler to acquire than others. If a given semantic domain receives expression earlier in one of the two languages, a difference in formal complexity is suggested.<sup>4</sup> If, on the other hand, a given meaning receives expressions at the same time in both languages of a bilingual child, this suggests that the formal devices in the two languages are similar in complexity.<sup>5</sup> At this point D. I. Slobin arrives at his first conclusion: Cognitive development and linguistic development do not run off in unison, the former of them being the primary. On the basis of current findings and theory<sup>6</sup> he believes that the pacesetter in linguistic growth is the child's cognitive growth as opposed to an autonomous linguistic development which can then reflect back on cognition. The argument that the language is used to express only what the child already knows can—in the author's opinion—be supported by another line of evidence coming from an examination of linguistic development from both a formal and a functional point of view. The psychological principle that "New forms first express old functions and new functions are first expressed by old forms" is here illustrated by numerous examples from grammatical development. Of them, the locative example is the most persuasive. The use of utterances in context indicates that locative relation are intended. When the appropriate new forms enter—be they prepositions, postpositions, inflections etc.—they will be new forms expressing old functions. The second part of the principle, viz. "New functions are first expressed by old forms" explains the child's behaviour in finding the linguistic means for newly developed cognitive notions. Acquisition of the complexities of English auxiliaries and negatives provide many examples, cf. e.g., the expression of Slobin's three-year-old daughter: "*Anything is not to break, just glasses and plates*" or when recovering from an illness "*I must have getting weller and weller*". These examples necessarily recall the Czech child's ignoring of the negative concordance which is obligatory to Standard Czech, cf. "*Všecko nemáme*" instead of "*Nic nemáme*" or the analogous

formation of comparative *dobrý* (good) — *dobřejší* (better) where Standard Czech has irregular forms *dobrý* — *lepší*. Many other data from the speech development of Czech children illustrate the fact that their semantic development had outstripped their formal grammatical development. The Non-Standard rules in dealing with various derivations, formation of plural, gender, verbal aspect and comparison are the most frequent.

In the next chapter D. I. Slobin has the following program: 1. to compare the development of the formal means of locative expressions in several languages; 2. to propose a developmental universal based on inductive generalization of these findings; 3. to propose a psycholinguistic operating principle which may be a partial determinant of the general finding.

Coming back to the Hungarian-Serbcroatian bilingual girls (cf. Note 4) he shows that in Hungarian there are nominal monosyllabic inflections which systematically encode position, motion towards and away from a position. They apply to all nouns (there is no grammatical gender in Hungarian). Serbcroatian, on the other hand, has a number of prepositions which encode locations; some of them encode direction while some do not distinguish between direction and position. In addition, Serbcroatian encodes the distinction between position and direction by means of noun inflections. The situation is even more complex because of a variety of semiarbitrary pairings of preposition with case. Furthermore every preposition governs a noun inflection which might be either meaningful or redundant. The particular phonological realization of a given inflection is determined by the gender and by the final sound of each particular noun. Comparing the two languages we see that the Hungarian means of locative expression is much simpler and represents a system which can be described by a small set of consistent and regular rules. As such it is naturally easier to learn than one less consistent and less regular. Furthermore, it is expressed by noun suffixes. This may facilitate acquisition in that the end of a word seems to be perceptually salient for all children.<sup>7</sup> Hence follows Slobin's suggestion that part of the difference in ease of acquisition has to do with the pre- or post-nominal location of locative markers in the two languages and his first universal: Post-verbal and post-nominal locative markers are acquired earlier than pre-verbal and prenominal markers. The prepositions are missing from the earliest stages of Serbcroatian monolingual child speech and inflections begin to emerge before prepositions as shown in the works of Pavlović, Mikeš and Vlahović.<sup>8</sup> The best support for this suggestion is the finding that Serbcroatian children begin to express the difference between position and direction by adding noun inflection rather than prepositions. Additional evidence comes from cross-linguistic comparison. Slobin mentions the behaviour of Russian and Latvian children.<sup>9</sup> We can, however, find the same pattern of prepositional and inflectional acquisition in Czech-speaking children. The first locatives are *noun* — *noun* combinations, cf. *panenka* — *postýlka* (doll — bed). At the next level, the locative and accusative *case endings* emerge while the prepositions are still ignored, cf. *panenka postýlce* (locative representing position) — *panenka postýlky* (locative representing direction). The governing prepositions appear in the next stage of speech development and even then are not used consistently. At first they are established in the situation where they have

the function of distinguishing between position and direction, i.e. where the case endings are identical, cf. *v kočárku* (in the pram) — *do kočárku* (into the pram), while in the situation where the inflection is meaningful, both the prepositions are still missing, cf. *postýlce* — *postýlky*.

In English, too, prepositions tend to be omitted in early child speech though there are no inflections available to use in the place of them. Well before the acquisition of prepositions<sup>10</sup> English-speaking children use locative verb particles *on*, *off*, *down* etc. The same is true of analogous German particles, such as *ab*, *an*, *auf*, *mit* etc. as illustrated in the works of Leopold and Park.<sup>11</sup> By contrast, Slavic verbal particles of this sort are prefixed to the verb and—as shown in the longitudinal studies of Polish child speech by G. Shugar<sup>12</sup> emerge at the same time as prepositions, i.e. relatively later than they do in English.—As for Czech, we may find confirmation of Slobin's suggested universal in children's approach to verbal aspect. As generally known, Czech has a highly developed category here. A great majority of verbs can be altered in such a way as to be capable of expressing whether the action took place once or repeatedly. To express the difference between the verbs of perfective or imperfective character the adult Czech resorts to prefixes, cf. *psát* — *napsat*, *zpívat* — *zazpívat*. The Czech children, on the other hand, create the perfective forms by changing the end of the verb, cf. *psát* — *písnout*, *zpívat* — *zpívnout*, in other words, they employ the different suffix which is in this connection alien to Standard language. The suffix is preserved even in that period when the child has already the prefixed form in his vocabulary. The suffix evidently remains meaningful as the perfective marker while the prefix is so far redundant.

Let's deal now with Slobin's operating principles employed in the ontogenesis of grammar and the suggested universals: Principle A: "Pay attention to the end of words". This principle has been reflected in data on word imitation and in the acquisition of locative expressions. It is, however, also evident in the acquisition of other inflection system. Slobin mentions the early acquisition of accusative and dative inflections in inflected languages like Russian, Polish, Serbocroatian, Latvian, Finnish, Hungarian and Turkish (and we may add Czech, too) where they are expressed by noun suffixes. But these inflections are relatively late in the acquisition of German<sup>13</sup> where they are realized as forms of prenominal articles. English articles are also lacking at early stages of development. And it is not the semantic nature of articles because the Bulgarian article—which is a noun suffix—appears early in the child.<sup>14</sup> The principle also accounts for the Grégoires finding that the first negative element in early French speech is *pas*, i.e. the final member of the separated pair *ne...pas*. All these findings suggest a general developmental universal, based on the supposition that operating principle A is one of the first operating principles employed in the ontogenesis of grammar.

Universal A<sup>1</sup>: "For any given semantic notion, grammatical realizations in the form of suffixes or postpositions will be acquired earlier than realizations in the form of prefixes or prepositions". In order for this universal to be manifested, a number of language definitional universals must be taken for granted, e.g. that there are words, that the meaningful unit is smaller than the word, that sounds can

express grammatical relations as well as make reference etc. In additions, the emergence of inflections requires also operating principle B, viz. "The phonological forms of words can be systematically modified". Numerous observers have reported a period of playful modification of words which precedes the emergence of inflections. Thus Verner and Kaplan<sup>15</sup> cite many examples of reduplication, suffixing etc., Shugar<sup>16</sup> early Polish diminutives, Ruže Dravina<sup>17</sup> gives examples of the early non-comprehending use of linguistic forms in Latvian etc. Many Czech examples might be quoted in this connection, too. Slobin cites the one where the Czech boy inserted extra syllables into adjectives in order to intensify their meaning<sup>18</sup>. Furthermore, there are many inflectional diminutive, augmentative and affectionate forms in early speech which have no parallels in adult language, cf. "panulilénka"—a diminutive form of "pana" (doll), *tatas, tať*—a pejorative form of "tatínek" (father), *auták, ježák*—augmentative forms of "auto", "ježek" (car, hedgehog), *medula*—an affectionate form of "medvěd" (teddy-bear) etc. Very frequent are those examples that reveal the non-comprehending use of linguistic forms. Let's mention here at least some of them: the agreement of gender is ignored in adj. and verbs. All of them have feminine endings at first developmental stage, cf. "Malá Honzíček papala" (× "Malý Honzíček papal"); the plural endings are added to nouns before the acquisition of the pluralization rule, cf. *lev — lefi* (lion) instead of correct "lev — lvi" (the neutralization of the voiced/voiceless contrast obligatory for Czech in final position has to be reminded here); the back-formation of the non-existing sg. of pluralia tantum, cf. *teplák — tepláky* (trousers), *dveř — dveře* (door); the free variation of the endings distinguishing hard vs. soft or animate vs. inanimate declension, cf. *krabica — krabice* (box) *hrada — hradu* (castle).

Operating principle C: "Pay attention to the order of words and morphemes."

Universal C<sub>1</sub>: "The Standard Order of functor morphemes in the input language is preserved in child speech".—Slobin maintains that no observer report deviant orders of bound morphemes, the correct morpheme order, on the other hand, is manifested in Garo, Turkish, Finnish, Hungarian and English child speech. According to our data, Czech may be added to the list.

Universal C<sub>2</sub>: "Word order in child speech reflects word order in the input language". This universal is rather vague as data vary in this respect. It might be agreed, however, that word-order in child speech is more consistent in languages with fixed word-order, e.g. English as opposed to the languages with relatively more freedom in this regard, e.g. German, Slavic languages (Czech included), Finnish, Turkish.

Universal C<sub>3</sub>: "Sentences deviating from Standard word-order will be interpreted at early stages of development as if they were examples of Standard word-order".—This universal is again applicable foremost in languages with fixed word-orders, as data from English illustrate. In inflected languages—Slobin has examples from German—there may be an inversion of indirect and direct object in imperative. Due to the inflection, nor sense nor grammaticality is lost. As for Czech, we have some deviations in children's word-order which, however, are caused by the strongly emotional

character of the sentence, cf. *děcko škaredý* i.e. noun + adj. while Standard Czech word-order is adj. + noun or *jsme šli*, i.e. auxiliary verb + notional verb, contrary to Standard Czech *šli jsme*, i.e. notional verb + auxiliary verb.

Operating principle D: "Avoid interruption or rearrangement of linguistic units."

Universal D<sub>1</sub>: "Structure requiring permutation of elements will first appear in non-permuted form".—English yes-no questions first appear in non-inverted form, cf. "*I can go*". Inversion is also absent in the first wh-questions, cf. "*where I can go*" and in the first relative clauses cf. "*I know what is that*". And, strangely enough, there are analogous examples in Czech-speaking children, too, cf. "*Jiříček půjde*" × *Půjde Jiříček*" "*Vím, co je to*" × "*Vím, co to je*."

Universal D<sub>2</sub>: "Whenever possible, discontinuous morphemes will be reduced to, or replaced by continuous morphemes."—Slavic (Czech included) case inflections are first used to express the contrast between position and direction, in the absence of prepositions, i.e. the locative notion is at first not marked on both sides of the noun.—The first form of the English progressive is the verbal inflection *-ing* with no pre-verbal auxiliary. Similarly, in mastering the preterit in Czech, the child at first ignores the auxiliary, cf. *šli, šel* instead of Standard *šli jsme, šel jsem*.—The Grégoire's example about the first form of negation in French being the final part of the discontinuous morpheme *ne... pas* is once again repeated in this connection. Further examples from Arabic are quoted to support universal D<sub>2</sub>.

Universal D<sub>3</sub>: "There is a tendency to preserve the structure of the sentence as a close entity, reflected in a development from sentence-external placement of various linguistic forms to their movement within the sentence."—This universal is supported by English early negative forms "*No do this*", "*I no do this*", by earlier appearance of sentence-final relative clauses than embedded relative clauses, cf. "*I met a man who was sick*" × "*The man who was sick went home*" and by Finnish yes-no questions.

Universal D<sub>4</sub>: "The greater the separation between related parts of a sentence, the greater the tendency that the sentence will not be adequately processed."—The offered examples show that neither length nor number of embedded sentences is responsible for mistakes in imitation, comprehension or production in English children. What is difficult, is not embedding, but self-embedding, e.g. "*The man that fell down ran away*."

Operating principle E: "Underlying semantic relations should be marked overtly and clearly".

Universal E<sub>1</sub>: "A child will begin to mark a semantic notion earlier if its morphological realization is more salient perceptually". Here D. I. Slobin brings examples—some of them quoted in operating principle A—to show that children apparently prefer that grammatical functors which are highly productive and more than that which are clearly marked acoustically. The behaviour of Czech-speaking children can also offer support for this universal. The analogous formation according to highly productive forms has been already mentioned. The opposite case

is manifested in the child's stubborn clinging to the masculine interpretation of the proper feminine noun "sůl" (salt). The non-existence of another feminine of this type in his vocabulary while he acknowledged and actively used several masculines of this type, cf. *stůl, kůl, vůl, důl* accounts for this fact.—In phonetic plane we may find confirmation of this universal in the fact that the correct realization of the more difficult phonemes, e.g. [k], [č] are first mastered and used in suffixes while in initial position they are still replaced by their substitutes viz. [t] and [tʰ], resp. [š], cf. [tibíček] *kyblíček*, [tepička] *čepička* [teličko] *čelíčko*, [šíst] *číst*. Also the consonantal clusters first appear in suffixes, i.e. in medial and final positions while the initial clusters are still simplified, cf. [váčki] *vláčky*, [kalotki] *kalhoty*, [váski] *vlásky*. The functional relevance (the contrast of a substantive + a substantive in diminutive form) plays, no doubt, an important role here.

Universal E<sub>2</sub>: "There is a preference not to mark a semantic category by zero morpheme: if a category is sometimes marked by O and sometimes by some overt phonological form, the latter will—at some stage—also replace the zero."—This universal is richly exemplified by data observed in Russian, Serbocroatian, English and Arabic children. Some Czech examples might be quoted, too, cf. the noun sg. accusative for masc. inanimate nouns is marked by O. The children, nevertheless, add the ending -a, borrowing it from masc. animate nouns, e.g. *domečka* (house) instead of proper *domeček*, *stůla* (table) instead of *stůl* etc. Also in neuter nouns the improper accusative ending is used, cf. *kuřeto* (chicken)/×*kuře*/. Besides, there are cases, where there is an inflectional ending in Standard Czech, the child however, chooses another one in his speech, cf. *k domečkovi* /×*k domečku*/(to the house), *k doktorkovi* /×*k doktorce*/(to the lady doctor). The child evidently prefers the highly productive masc. animate noun ending neglecting thus the inanimate character in the former example and the feminine gender in the latter.—In imperative, too, the Czech child adds an ending where there is none in adult language, cf. *skožňi* (×*skoč*), *spravňi* (×*sprav*), *utekňi* (×*uteč*).

Universal E<sub>3</sub>: "If there are homonymous forms in an inflectional system, those forms will tend not to be the earliest inflections acquired by the child, i.e. the child tends to select phonologically unique forms—when available—as first realization of inflections." This universal is manifested by Russian children's preference for ending -om as compared to more frequent feminine -oj. (The former ending has only one homonym, viz. masc. + neuter loc. adj. inflection while -oj represents five homonymous inflections, viz. sg. adj. masc. nom., fem. gen., dativ, instrumental, prepositional cases).

Universal E<sub>4</sub>: "When a child first controls a full form of a linguistic entity which can undergo contraction or deletion, contractions or deletions of such entities tend to be absent".—Slobin supports this universal by English children's usage full forms "I will" (×*I'll*) and by inserting relative pronouns where they are deleted in the model sentence, cf. "I see the man the boy hit" × "I see the man who a boy hit." We can hardly find equivalents in Czech where there is no reduction and relative pronouns and conjunctions are not deleted. Similar situation, however, may be found in phonological development. An attempt for hypercorrect pro-

nunciation or the tendency to show that the child has already mastered the realization of a difficult consonant or consonantal clusters he used to replace or simplify in former stages is evident in such examples as [maminka] (where alveolar instead of proper velar allophone of /n/ is realized), [kuška, kapičky] instead of correct *tužka, kapičky*, [vráski] instead of *vlásky* etc. The tendency to adopt the correct (adult) speech is also shown in children's back formation of the supposed diminutives to their non-existing indiminutive forms, cf. *ponožka* — *ponoha*, *liška* — *liša*.

Universal E<sub>5</sub>: "It is easier to understand a complex sentence in which optionally deletable material appears in its full form". Once again the child's preference for full forms as compared to sentences where relative pronouns and conjunctions are omitted, is manifested. One interesting example to show that the child understands the appropriate underlying relation is mentioned in this connection. The model sentence "The man who I saw yesterday got wet" was interpreted by the child as "I saw the man and he got wet". Similar interpretations may be found in Czech-speaking children, too, and are—in our opinion—explicable on the ground of the child's predilection for parataxis in preference to hypotaxis, cf. the model sentence "Chlapeček, který spadl, pláče" (The boy who fell down and is weeping) with the child's "Chlapeček spadl a pláče" (The boy fell down and is weeping) or the nursery rhyme "Máma se raduje, že bude pět vdolky" (Mother is pleased that she may bake scones) interpreted as "Máma se raduje a bude pět vdolky" (Mother is pleased and will bake scones).

Operating principle F: "Avoid exceptions".

Universal F: "The following stages of linguistic marking of a semantic notion are typically observed 1. no marking; 2. appropriate marking in limited cases; 3. overgeneralization of marking; 4. full adult system".—Overregularization and overgeneralization is the most widely noted aspect of child speech and every observer in any language has examples of analogous formations, overextensions of regular principles etc. Let's mention here at least the most frequent data to support universal F in Czech-speaking children: a) the regular formation of plural—mostly by means of analogous endings to masc. animate nouns (while neglecting the question of gender, changes of stem-consonant, elision of vowel, irregular classes etc.), cf. *chlapeček* ( $\times$  *chlapečci*), *očičky* ( $\times$  *očička*), *ušičky* ( $\times$  *ouška*), *kobereci* ( $\times$  *koberce*); b) the redundant marking of the accusative inanimate nouns, cf. *stolečka* ( $\times$  *stoleček*), *oříška* ( $\times$  *oříšek*), *stroma* ( $\times$  *strom*) etc.; c) feminine ending in past tense for all verbs, regardless of the gender of the subject noun, cf. *Honzíček papala* ( $\times$  *Honzíček papal*), *kuřátko papala*, ( $\times$  *kuřátko papalo*); d) feminine ending for all adjectives regardless of the optional agreement of gender adj. + noun in Standard Czech, cf. *malá chlapeček* ( $\times$  *malý chlapeček*), *malá holčička*, *malá jablíčko* ( $\times$  *malé jablíčko*); e) analogical formation according to a highly productive verb "dělat" cf. *děkovám* ( $\times$  *děkuji*), *klekám* ( $\times$  *klečím*), *plakám* ( $\times$  *pláči*).

Universal F<sub>2</sub>: "Rules applicable to larger classes are developed before rules relating to their subdivisions and general rules are learned before rules for special cases".—Slobin offers Gvozdev's example where Russian child does not distinguish between mass and count nouns requiring that every noun has a singular and a plural form. The same



holds good with Czech children. They, too, pluralize mass nouns, cf. *cukr* — *cukry* (sugar) and invent singulars for pluralia tantum, cf. *to kamno* besides *ta kamna*, (oven) *ta nůžka* besides *ty nůžky* (scissors) etc. Another example supporting universal F<sub>2</sub> is the Czech child's not differentiating between the categories of animate and inanimate masculine (the accusative inflection of animate substantive is given the preference). The same universal might also be applied to the regular formation in comparison of adjectives in children where adult Czech has irregular forms, cf. *dobrý* — *dobřejší* — *nejdobřejší* (×*dobrý* — *lepší* — *nejlepší*) (good — better — best) or *zlý* — *zlejší* — *nejzlejší* / ×*zlý* — *horší* — *nejhorší* (bad — worse — worst) or to the child's usage of infixes in order to change the verbal aspect in those cases where adult Czech resorts to prefixes, cf. *zpívám* (imperfective form)—*zpívnu* / ×*zazpívám*/(perfective form).

Operating principle G: "The use of grammatical markers should make semantic sense."

Universal G<sub>2</sub>: "When selection of an appropriate inflection among a group of inflections performing the same semantic function is determined by arbitrary formal criteria, the child initially tends to use a single form in all environments, ignoring formal selection restriction".—The examples cited under universal E<sub>2</sub> and universal F<sub>1</sub> support universal G<sub>1</sub> as well. For each particular grammatical case category, the Slavic child (Czech included) selects one salient case ending to express the semantic of that case in connection with all nouns. The undulging grammatical rule, therefore, is semantically appropriate, but only formally deficient: Case and number agreement is acquired before gender agreement in Russian, Serbocroatian and Czech children.

Universal G<sub>2</sub>: "Error in choice of functor are always within the given functor class and subcategory."—Although there are many confusions as to the proper suffixes within any category, the child never uses a suffix with the wrong lexical class. Neither confuses he the individual parts of speech.

Universal G<sub>3</sub>: "Semantically consistent grammatical rules are acquired early and without significant errors".—There is no principled basis for remembering, e.g., that some verbs form irregular past tenses (in English) or that some nouns have irregular plurals (in English and Czech) or that some adjectives have irregular comparison (in English and Czech). These lists must be learned by rote and the result is that such forms are overregularized in child speech. It is naturally easier to apply a rule uniformly than to block it for unprincipled reasons, and so, long after English children show their knowledge that one cannot say "*I am knowing*" they still persist in saying things like "*I knowed*", "*two sheeps*" "*weller*" etc., similarly as Czech children persist in saying „*králíčeki* (×*králícci*), *dobřejší* (×*lepší*), *ten sůl* (×*ta sůl*).

The lack of space prevents us to go on with the analysis of D. I. Slobin's highly interesting and stimulating study. In the above pages we have tried to show that most of his operating principles and suggested universals might be confirmed by the behaviour of the Czech children when mastering their mother tongue. If there are some exceptions, they are easily explicable on the ground of specific peculiarities typical for Czech in contradistinction

to English or other languages D. I. Slobin deals with. Naturally, our contribution to his study confines itself just to the roughest outlines of the examined process. A more detailed study of Czech-speaking children's approach to the grammatical structure would, no doubt, bring additional material to support, enrich and perhaps further elaborate his ideas.

## NOTES

- <sup>1</sup> The paper will be published by Linguistic Research, Inc. 9116—83rd Street, Edmonton, Alberta, Canada
- <sup>2</sup> Cf. M. K. Omar, *The Acquisition of Egyptian Arabic as a Native Language*. Unpubl. doct. dissert. Georgetown Univer. 1970 (To be published by Mouton).
- <sup>3</sup> Cf. M. F. Bowerman, *Learning to Talk*. A crosslinguistic study of early syntactic development, with special reference to Finnish. Unpubl. doct. dissert., Harvard Univer. 1970
- <sup>4</sup> D. I. Slobin finds an useful example to support this fact in the studies by M. Mikeš nad P. Vlahović. Two Serbocroatian-Hungarian bilingual children were productively using Hungarian case endings on nouns indicating locative relations at the age of two, while they hardly begun to develop locative expressions in Serbocroatian, which requires a locative preposition before the noun along with some case inflection attached to the end of the noun.
- <sup>5</sup> The confirmation of this idea might be found in the example given by N. V. Imedadze, cf. *K psihologičkoj prirode rannego dvujazičija* Vopr. psihol. 1960, 6, (1), p. 60—68, viz. the simultaneous emergence of the genitive and the instrumental in Russian—Georgian bilingual daughter.
- <sup>6</sup> Cf. H. G. Furth, *Piaget and Knowledge: Theoretical Foundations*. Englewood Cliffs, N. J. Prentice Hall, 1969; J. Piaget, *Six Psychological studies*, New York 1967; *Piaget's Theory*, In P. H. Mussen (ed.) Carmichael's Manual of Child Psychology, 3rd ed. Vol. 1, New York 1970, pp. 703—732
- <sup>7</sup> The abbreviation of words, where the end is preserved while the initial syllables—stressed or unstressed—being dropped, is one of the typical feature of any child's speech. O. Jespersen is the first to mention it in his *Language, its Nature, Development and Origin*, London—New York 1922, p. 7.—As for the other workers in this field, cf. J. Pačesová, *The Development of Vocabulary in the Child*, Brno 1968, p. 205, where their data are referred to.
- <sup>8</sup> Cf. M. Pavlović, *Le langage enfantin: Acquisition du serbe et du français par un enfant serbe*. Paris, 1920; M. Mikeš, *Acquisition des catégories grammaticales dans le langage de l'enfant*. Enfance, 1967, 20, p. 289—298; M. Mikeš—P. Vlahović, *Razvoj gramatičkih kategorija u dečjem govoru*. Prilozi proučavanju jezika II, Novi Sad, 1966.
- <sup>9</sup> Cf. A. N. Gvozdev, *Formirovanie u rebenka gramatičeskogo stroja ruskogo jazyka*, Moskva 1949; Ruže Dravina, *Zur Sprachentwicklung bei Kleinkindern*, Syntax, Lund 1963, p. 141
- <sup>10</sup> The first prepositions to appear in English are "on" and "in", cf. R. Brown, *Grammatical Morphemes and the Modulation of Meaning*, Stage II, Mimeo, Harvard University, 1970
- <sup>11</sup> Cf. W. F. Leopold, *Speech Development of a Bilingual Child: a Linguist's record*, Vol. 1, Vocabulary Growth in the First Two Years, Evanston 1939; Tschang-Lin Park, *The Acquisition of German Syntax*. Working Paper, Psychologisches Institut, Universität Münster, Germany 1970z As to the English verb particles, data may be found in the above mentioned work of Leopold; cf. also M. D. S. Braine, *The Ontogeny of English phrase structure: The first phase*. Language, 1963, 39, pp. 1—13; W. R. Miller & S. M. Ervin, *The Development of Grammar in Child language*. In Bellugi & Brown (Eds.) *The acquisition of Language*, Monogr. Soc. Res. Child Development 1964, 29, 9—33
- <sup>12</sup> Cf. G. W. Sugar, *Personal Communication*, Jan. 31, 1971
- <sup>13</sup> Cf. Cl. u. W. Stern, *Die Kindersprache*, Leipzig 1907
- <sup>14</sup> Cf. I. A. Gheorgov, *Ein Beitrag zur grammatischen Entwicklung der Kindersprache*. Arch. ges. Psychol. 1908, 11, p. 242—432

- <sup>15</sup> Cf. H. Werver & B. Kaplan, *Symbol Formation*, New York 1963, p. 155ff.
- <sup>16</sup> Cf. G. W. Shugar, Note 12
- <sup>17</sup> Cf. Ruže Dravina, *Zur Entstehung der Flexion in der Kindersprache*, Internatl  
J. Slavic Ling & Poetics, 1959, 1/2, 201–222
- <sup>18</sup> Cf. J. Pačesová, *The Development of Vocabulary in the Child*, Brno 1968, p. 216

