INTRODUCTION

WOLFGANG U. DRESSLER

Commission for Linguistics and Communication Research
Austrian Academy of Sciences

This volume unites selected papers from two workshops: 1) The workshop on "The Acquisition of Morphology in L1", which took place in connection with the Seventh International Morphology Meeting (February 1996, Vienna); 2) The workshop "On Pre- and Protomorphology" held during the Seventh International Congress for the Study of Child Language (July 1996, Istanbul).

All contributions come from work done within the framework of the international project on "The Acquisition of Pre- and Protomorphology" organized by Wolfgang U. Dressler on behalf of the Austrian Academy of Sciences (and also partially supported by the project P 10250-SPR of the Austrian Research Foundation FWF). The aim of this project is to compare the acquisition of morphology in about two dozen languages by children from the age of 14 months onward. Among the languages selected, there is an emphasis on morphology-rich languages, both closely related ones and genetically and typologically different ones. Closely related are 1) the five Slavic languages: Russian, Ukrainian, Polish, Croatian, Slovene, 2) the Germanic languages: German, Dutch, English (which is typologically rather different), Swedish, 3) the Romance languages: Italian, Spanish, French (which is typologically rather different) on the one hand, and 4) the Finno-Ugric languages: Hungarian, Finnish, Estonian (which is typologically rather different) and 5) the Semitic languages Hebrew and Arabic on the other. Distantly related are the Indo-European languages Greek and Lithuanian. Unrelated are Turkish, Basque, Georgian, the Mexican languages Yucatec Maya and Huichol, Korean, and morphology-poor Thai.

The empirical basis of this comparative project is parallel collection of longitudinal, spontaneous production data and their recording, transcription and coding in CHILDES format, in order to be able to use CHAT programs for comparative quantitative analyses.

Beyond descriptive aims, the project encompasses a theory-guided study of the very first phases of the acquisition of morphology, divided into the three phases:

premorphology, protomorphology, and modularised morphology. The epistemological approach is characterized by the use of functional explanation (Dressler 1995).

The linguistic approach is either based on, or at least compatible with, the model of Natural Morphology (Kilani-Schoch 1988), with its distinction of (a) grammatical rules vs. extragrammatical operations and (b) prototypical vs. non-prototypical morphology (Dressler and Merlini 1994). If one assumes internal modularisation or at least compartmentalisation of grammar, then grammatical rules of prototypical morphology (e.g. case inflection in nouns or person inflection in verbs) are part of the module of morphological grammar, whereas extragrammatical operations (e.g. echoword formation) are not. Rules of non-prototypical morphology (e.g. plural formation in nouns or diminutive formation) are situated on the margins of the submodules of inflectional and derivational morphology.

The developmental approach is constructivist, i.e. based on the model of self-organizing processes (autopoiesis, Karpf 1991). Children interact selectively with the environment, their selection of data from the environment is carried out on the basis of the presently available criteria, i.e. the respective (stage of the) system determines and enlarges the basis for the further selection and organization of information.

The developmental and the linguistic models are integrated (Dressler and Karpf, 1995), insofar as children's preferences in the selection of input data are based on a) the principles of Natural Morphology, and b) constructivist principles of pattern selection, i.e. saliency, frequency and repeated occurrence in a comparable configuration (for details see Maturana and Varela 1979; Edelman and Finkel 1984; Singer 1990, 1993; Karpf 1990, 1994).

The processes active in developmental changes are self-organizing and lead to increasing complexity or, in order to make complexity manageable, to successive bifurcations or dissociations, which gives rise to modularity. Our contention is

1. that linguistic modules are not genetically inherited (Karmiloff-Smith 1992);
2. that in the premorphological phase, a separate, distinct grammatical module has not yet been developed, and that morphological operations are handled by the child via more general cognitive principles;
3. that the system of morphological grammar develops only in the protomorphological phase, in accordance with the universals of Natural Morphology (Kilani-Schoch 1988; Dressler et al. 1987);
4. that the protomorphological stage ends when the subsystems of inflectional, derivational, and compounding morphology start to develop, i.e., within a modular framework, when the grammatical modules of syntax, morphology and phonology pass beyond their initial stages;
5. that modules originate from earlier global systems through dissociation (Karpf 1990, 1991, 1994).

We can define the premorphological phase of language acquisition as the phase where morphological operations occur – both extragrammatical (or "expressive") ones and precursors of later grammatical rules. These precursors consist of rote-learned forms whose selection is based on principles of naturalness and constructivism. In the pre-morphological phase, no system of grammatical morphology has yet become dissociated from a general cognitive system that handles, inter alia, words of whatever form (including morphological forms), i.e. pre- and at least early protomorphology are part ot the lexicon.

When this "protolexicon" becomes not just bigger, but also more complex and diverse in its properties, generalisations to be drawn about operations within this increasing heterogeneous lexicon cluster according to emerging similarities. It becomes more efficient to dissociate clusters into separate subsystems, which induces the child to construct systems of grammar, and finally subsystems of syntax and morphology.

The protomorphological phase of language acquisition can be defined as the period when the system of morphological grammar and of its subsystems starts to develop without having reached the status of modules and submodules. In this period, children start to construct creatively morphological patterns of rules, many of them overgeneralised, i.e. with unrestricted productivity (Dressler 1997).

Some of these paths constructed by children represent blind alleys, i.e. patterns/rules which are structurally not intermediate between earlier patterns/rules and adult ones, but go in "wrong" directions (from the adult point of view), and therefore must be given up later on, i.e. the child must make a fresh start. In this period also most interindividual variation is to be expected. Such blind alleys are taken as prime evidence in support of a constructivist acquisition model (the paper by Kilani-Schoch et al.).

The lack of morphological grammar in pre- and protomorphology proves to be extremely dysfunctional (Dressler 1995) when the child is in growing need of a rapid expansion of its lexical inventory and when (in many languages) expanding syntax needs morphological marking of syntactic categories. In order to handle the increasing morphological complexity, a primitive system of morphology dissociates. Next, the two main functions of word formation, namely lexical enrichment and motivation need to be served, and, as a consequence, productive word formation explodes (Clark 1993 on "filling of lexical gaps"). This leads to ever greater complexity, paralleled and even more increased by the accumulation of inflectional devices. In order to serve the different functions of inflection and word formation the primitive morphological system must dissociate, giving rise to separate submodules of inflection and word formation.

Extragrammatical morphological operations, however, do not partake in both the functions of emerging grammatical systems and their emerging properties, unless by sheer (and entirely optional) analogy (i.e. accommodation in the sense of Piaget 1935). Due to their heterogeneity they cannot form a module of their own.

Investigation of children within the international project ends when modularised morphology is being elaborated on. An important task of several papers in this volume is to study empirical problems of delimiting these three phases of premorphology, protomorphology and modularised morphology and to relate them to phases in the development of phonology and syntax.

The papers in this volume can be briefly characterised in the following way:

The paper by Marianne Kilani-Schoch, Anna de Marco, Anastasia Christofidou, Maria Vassilakou, Ralf Vollmann, and Wolfgang U. Dressler "On the demarcation of phases of early morphology acquisition in four languages" is a comparative longitudinal study of five children from four article languages (French, Italian, Greek, German), all "fillers-children". Use and domain of fillers first extend with grammatical awareness, then differentiate phono-morphologically, finally are differentially replaced by grammatical markers, first in competitive coexistence. In premorphology, inflected word forms are rote-learned, with restricted pattern selection. In protomorphology, first analogies and blind alleys of acquisition occur. With the transition to modularized morphology, there is an increase in syntactic complexity and a decrease of fillers, productive use of inflection, and an emergence of different classes of (mini-) paradigms.

Ulrike Hasiba's contribution "Cross-linguistic comparison in concept formation: Locality and possession", is the second cross-linguistic paper. It deals with Russian (presenting a reanalysis of Varja, who is also the child investigated in Protassova's paper), with two German boys from Graz (being part of the Austrian project), and with English (from the literature). It is a morphosyntactic study, whose second topic is overlapping with Ceytlin's paper. There is a broad introduction into issues in self-organization and Natural Morphology, and it is closest to Karpf's model (see above).

Stella Ceytlin's contribution "Acquisition of possessive relations by a Russian child" studies how and when (which) particular possessive relations are acquired. She distinguishes six meaning subtypes and five formal subtypes of possessive relations, which gives the paper an unrivalled descriptive power.

The paper by Ralf Vollmann, Maria Sedlak, Brigitta Müller and Maria Vassilakou "Early verb inflection and noun plural formation in four Austrian children: The demarcation of phases and interindividual variation" represents the first comparative longitudinal investigation of several Austrian children. Similarity in the demarcation of phases proved more important than interindividual variation.

Dorit Ravid's paper "Early morphological development a duo: Pre- to protomorphology in Hebrew-speaking twins" traces the early lexical, morphological and syntactic stages in the speech of two Israeli dizygotic twins (boy and girl) over a period of six months, from premorphology to protomorphology. Both develop in similar ways in pace and types of evolution. It is shown that active syntax appears together with protomorphology and with the expansion of the child's lexicon.

Next comes a joint paper by Livia Tonelli, Giuseppe Cappelli, Serena Bonifacio, Elisabetta Lanzetta, Wolfgang Dressler, and Anna Thornton "The application of MORF to the study of development of Italian verb morphology". Longitudinal data of children recorded in Trieste have been submitted successfully to the automatic morphology analysis system MORF, as developed in Pisa and tested with adults. Classification of Italian verbs and linguistic data analysis is done within the framework of Natural Morphology. The advantages of MORF and its applicability to other languages of the project are presented.

The contribution by Barbara Pfeiler and Enrique Martín Briceno "Early phases of verb acquisition in Yucatec Maya" shows the development from a nearly morphology-less premorphological phase over a transition phase to a much richer protomorphological phase in an ergative-absolutive language.

The paper by Anastasia Christofidou and Ursula Stephany "The early development of case forms in the speech of a Greek boy" presents "a preliminary investigation" of the development of gender distinctions (between masculine and feminine, not yet neuter) and of case and class distinctions, thereby following a new classification of Greek noun classes.

Maria D. Voeykova's "Acquisition of adjectival inflections (secondary paradigms in child Russian)" puts emphasis on attributive adjectives, which, in general, develop later than nouns. Of special interest is a mutual influence of noun and adjective inflections, especially when copying with endings occurs within the same noun phrase.

Ekaterina Protassova's paper "Transition from babbling to word structure" presents the data of two Russian children (of which one is also dealt with in Hasiba's paper). It focuses, first, on the transition from babbling-types of (quasi) reduplication (with much, apparently free, variation of word shapes) to the production of hypocoristic/diminutive and/or inflected forms and second, on popular etymologies in terms of phonological identification with the wrong adult targets.

Katarzyna Dziubalska-Kołaczyk's paper "Pre- and proto- in Polish phonology and morphology and their interrelations" is devoted to the interrelation of phonology and morphology in early phases of acquisition. It assumes an interdigitation of early morphological evolution into phases of phonological evolution. Thus demarcation of phases in morphological development is partially phonology-driven. As predicted by assumptions about the self-organisation of modules, extragrammatical phonological and morphological processes are hard to distinguish.

The methodological convergence in theory, methodology and in acquisition ages, finally the descriptive variety of nine languages treated gives an insight into the present state of the art of the project's particular approach to early phases of the acquisition of morphology. Thus this volume presents a more convergent view of the project than the preceding volume of Dressler (1997).

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