1. INTRODUCTION

In September 1978 the Standing Committee for the Social Sciences of the European Science Foundation endorsed a proposal to prepare an inventory of child language research in ESF countries. The motivation for this decision is best put in (the first author's) wording of the original proposal:

"The study of children's first language acquisition has undergone an explosive development since the early sixties. The increase in funding, research and publications in this area substantially exceeds the considerable growth rate of psycholinguistics in general. Several factors have contributed to this development. Transformational linguistics with its strong claims about universals in language and their biological foundation has provided an important impetus: a language is "released" in the child, rather than learned by means of contingencies and reinforcement. When these conceptions merged with the renewed interest in cognitive development, and especially with Piagetian theory which saw its rebirth in the United States during the sixties, a fruitful paradigm evolved: The initial orientation in psycholinguistics, which was strongly syntactic, became enriched by semantic and pragmatic approaches to language acquisition.

A more applied concern provided another impetus. Sociolinguists developed the hypothesis that the intellectual development of children starting primary school with insufficiently developed linguistic skills might be severely hampered. A "restricted code" might cause intellectual damage for life, and, to overcome this handicap, it would be necessary to develop training programs to stimulate linguistic development at a *very* early age. Though, in the end, very little empirical evidence was

obtained in support of this hypothesis, language training programs have flourished and enormously raised the preoccupations and interests in the child's early communicative competence.

However, it is important to point out that these developments were primarily restricted to English-speaking countries, and especially to the U.S.A. Generally speaking, European countries participated little in the main stream of this renewal process, although there are some notable exceptions. The study of child language in Europe is still a minor issue; research groups are scattered and have little working contact with one another. There is too little interdisciplinary cooperation between linguists and psycholinguists in the study of child language in Europe, teaching programs in psycholinguistics are minimal or non-existent at most European Universities, and scientific conferences with child language as a main topic are exceptional in Europe".

The proposal then goes on to mention some major reasons for promoting the study of child language in Europe. The first reason outlined relates to the basic theoretical issue of "nature versus nurture" in the acquisition of language. The existence of linguistic universals indicates that there are general principles of human nature that determine essential aspects of linguistic communication systems. But at the same time, the large variety of human languages shows that nurture, the more specific properties of the child's linguistic environment, are recognized and used by the child in building up linguistic competence and skill. The only means for sorting out the respective contributions of nature and nurture in the acquisition of language is to carry out systematic comparative studies between languages and cultures. Europe is the obvious battlefield for this type of cross-linguistic research, with its large variety of languages (about 25 in ESF countries). A second theoretical reason for promoting child language research in Europe has to do with bilingual ism. Some theorists claim that general cognitive and social development is the driving force behind language acquisition in the child. Others, however, argue that there are language-specific acquisition mechanisms in the child that function largely independent of cognitive or social development. The child who acquires two languages simultaneously affords a valuable opportunity for the study of this theoretical controversy since such a child is his own control for cognitive and social development: will the stage

of acquisition be the same for the two languages under these circumstances, or are there characteristic differences which can only be explained from structural differences between the two languages? Europe is the perfect area for the study of child bilingual ism. Roughly 3% of the children in Europe grow up in a bilingual environment, and there is a large variety of types, i.e. pairs of languages involved; in our own sample we found no less than 45 different types. Chapter 3 of this report discusses these theoretical arguments for cross-linguistic research in more depth.

There are, furthermore, science policy reasons for promoting the study of child language in Europe. Slow development of a discipline does not necessarily constitute a reason for giving it special promotion. In the present case, however, there are additional circumstances which call for a stronger European effort in this area. Given the theoretically quite central issues just mentioned, child language research could be carried out more easily in Europe than in the United States because of the greater availability both of languages, and of forms of bilingual ism. Child language research normally does not involve a great deal of complicated technology; as for technical equipment, almost any university could provide the basic facilities. In short, Europe has an advantage in terms of data base, which is not counteracted by technological disadvantages.

Moreover, there are clear social and educational reasons for promoting child language research in ESF countries. A major social reason arises from the influx of foreign workers into several ESF countries. It turns out that the workers' children often do not acquire the "host language" without great difficulties. Special educational measures are to be taken, but one lacks the scientific basis for making adequate decisions. Another social reason is to be found in the treatment and education of language disordered children. The taxonomy of disorders is complicated, involving as it does deaf, blind, cleft palate, subnormal, autistic, aphasic children, among others. Chapter 4 of this report discusses some aspects of European cooperation in the study of these handicapped. A further social reason is that almost all ESF countries are traditionally multilingual, containing sub-communities where children are exposed at an early age to a second language different from

their mother tongue. Laws with respect to schooling in first and second language in such cases differ from country to country, but there is a major educational problem here - not a purely political one - the solution to which will require insight into the mechanisms of first and second language acquisition. There is, moreover, a widespread concern about the relationship between bilingual ism, intellectual development, and personality development, and in particular whether bilingual children, or children who speak a dialect of the official language are disadvantaged. We do not know, but further study of these issues is necessary. Further social and educational reasons could be listed, but we will limit ourselves to mentioning the long term perspective from which many more specific reasons derive: the European future will depend to a large extend on how successfully a real cultural community is established. Cultural conventions are deeply embodied in language, the use of language, and language teaching. These conventions, as well as national stereotypes, are acquired during, and in interaction with, the first language, and they are especially language-bound in bilingual societies. A better understanding of developmental aspects of linguistic pragmatics may help us create more productive forms of cultural contact through language.

It was felt that a necessary first step towards the further promotion and coordination of child language research in Europe was the drawing up of an inventory of on-going research, and of institutions and scientists involved in developmental linguistics. This inventory could then be made available on a large scale to all interested. It was, moreover, hoped that during the preparation of such a survey sufficient interaction would take place between workers in the field to generate suggestions for ways of further European interaction. The ESF Steering Committee for the present project (consisting of Professor Jerome Bruner and the first author of this report) obtained the cooperation of Dr. Hannelore Grimm during the first few months of the project. Regrettably, this had to be discontinued for understandable professional reasons. Her role was taken over by the second author of the present report. The third author also contributed to the project from the outset.

Though the initial goals of this team of people were quite ambitious, the following two years resulted in the work being reduced to more

realistic proportions. It should be mentioned that unexpected personal and academic circumstances continuously interfered with the preparation of this document. However, we found it more important to be up-to-date and within our schedule, than to accomplish all our initial intentions of reviewing the state of the art and preparing detailed suggestions for future research cooperation. In the end, we did manage to collect the names, institutional addresses and main publications of most researchers of language acquisition in Europe. Also we can report in detail on the issues studied by these researchers and on various aspects of their research. These and other data are given in the five indexes at the end of this report. In the chapters which follow we also summarize some of the major issues that have arisen in our personal interactions with researchers all over Europe. They contain suggestions as to ways of cooperation in Europe, the use of cross-linguistic research, ways of promoting therapeutic, remedial and educational applications, and an analysis of the research questionnaire data. We would certainly have liked to do more, but we are convinced that the present report can perform the catalyzing function we envisaged at the start. The next few paragraphs give some details of how the survey was actually carried out.

A first circular was sent out in February 1979 to senior researchers in child language who were known to us, as well as to senior psychologists and linguists who might be in contact with lesser known researchers in our field of interest. A copy of the project proposal was enclosed with the circular and requests were specifically made for (i) suggestions regarding possible and important topics of cooperative research, (ii) information about personal research in the form of annual reports, recent papers and other literature which might be available, (iii) information about isolated child language researchers in less well-known institutions, and (iv) any general suggestions which might contribute to the success of the survey.

We received reactions from almost everybody addressed, though a reminder was sometimes necessary. The answers varied from short but often quite helpful letters to extensive sets of reports, publications, and even recently submitted research proposals. Even so, the number of new names and addresses that resulted from this first round was rather limited. We therefore decided to send out a further set of circulars to

persons identified by literally going through the major child language journals and picking out those articles whose authors belonged to universities in ESF countries. A copy was also sent to the head of *every* university department of psychology, linguistics, and education in ESF countries listed in the UNESCO directory.

Files were then established for each ESF member country (i.e. Austria, Belgium, Denmark, Finland, France, Fed. Rep. of Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom and Yugoslavia). Some of the files were bursting at the seams; others were notably thin or even empty. It was a joint study of the contents of each country file which led to the second phase, that of personal contacts.

The personal contacts took two forms. In those areas where there were clearly a large number of workers in child language anxious to promote European collaboration, special so-called "local meetings" were organized to which were invited a small number of researchers who represented their specialized sphere of child language research rather than merely themselves. Consequently they had often already been in contact with others in that sphere and discussions at the meetings attempted to be representative of the local area concerned. Five such meetings were held: in Berlin, Göteborg, Heidelberg, London and Rome. It often happened at these meetings that researchers from the same country met for the first time, and that all sorts of discoveries were made about on-going research in that country or neighbouring ones. At each of the local meetings between one and three members of our team attended to report on previous meetings and to stimulate discussion of suggestions for collaborative work. The main impression carried away from these meetings was the great awareness of the need to promote European collaboration in the area of child language research. Also a great variety of suggestions was made to us (see subsequent chapters). Occasionally we had to eliminate the misunderstanding that the outcome of our survey would only be beneficial to a small or selected group of people. We hope that the present report demonstrates our democratic intentions. All in all the local meetings were held in an atmosphere of helpfulness and inspiration.

The other type of personal contact was of a less formal nature. In this case one of our team would visit universities and research centres

personally, either to expand information about work that had already been reported to us, or to try and find persons rather like a door-to-door salesman. This approach turned out to be rewarding in many cases, and we were able to identify quite a large number of child language researchers working in isolation. Some gaps remained, however. There was a limit to our capacities for travel and detective work, and the last phase of the information gathering had to start.

This last phase consisted of the preparation and distribution of a child language research questionnaire. The questionnaire was prepared on the basis of an analysis of all data gathered. It was initially tested on a small sample of researchers, following which it was revised and put in its final form. The questionnaire, together with another circular reiterating the aims of the survey, were sent out to almost 1200 addresses. This was done in the course of June 1980. (See chapter 5 for further details.) Some have complained to us that the questionnaire was predominantly linguistic in character. Though we have not ignored psychological issues in the questionnaire, there is some truth in the observation, and a word of explanation may be needed. In the course of our survey activity it had become quite clear to us (i) that psychologists form the large majority of child language researchers, (ii) that the linguists' isolation is generally greater than the psychologists', and (iii) that there is relatively little interaction between these two disciplines concerning actual research. Given the science policy reasons specified earlier in this chapter we saw it as our task to give special stress to those aspects of research which could take advantage of the great variety of languages in Europe through cross-linguistic comparison. In other words, we definitely hope indeed that child language researchers in Europe will draw some linguistic inspiration from this report.

The indexes at the end of this report give a comprehensive account of the questionnaire findings. They can be used for a multitude of purposes, such as finding names, addresses, publications, and also for finding areas of research interest, gaps in present-day research, ideas for joint research, etc.

The files of our survey, including publications, manuscripts, suggestions for collaborative research, etc. are open to all qualified scientists in the area of child language research. They are available

at the Max-Planck-Institute for Psycholinguistics, Nijmegen under the title "Archives of European Child Language Research". The Institute will welcome persons wishing to consult the Archives, and make study space available for them.

Two final points should be made. Firstly, we do regret that the present inventory does not cover research in non-ESF European countries. Still, we hope that the inventory will help colleagues in those countries to make scientific contacts with those listed in the present report. Secondly, we would like to thank all those who have contributed to this survey by way of information and inspiration; we also want to express our gratitude to all those Research Councils who contributed to the costs of traveling and "local meetings", and to the Max-Planck-Society who provided the infrastructure for the project.

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2. WAYS OF COOPERATION

That child language research would benefit from more cooperation both within and between ESF countries is not in doubt. All oral and written reactions we received testify to this fact. Many colleagues have made more or less detailed suggestions about how to proceed in this regard. The reactions have, in fact, been so abundant that a comprehensive review of all proposals made cannot be given within the scope of this report. Still, it is possible and, we feel, potentially helpful to summarize the main and most frequent suggestions made to us. They go under several headings which will speak for themselves.

SCIENTIFIC ASSOCIATIONS

Most ESF countries have no scientific association of child language researchers. Moreover, there is no European scientific organization for this field, nor is there any for the more specific area of child bilingualism (or bilingualism generally, for that matter). The main suggestion made was to use *existing* linguistics or psychology organizations more effectively. A good working example in several ESF countries is the local AILA organization. This International Applied Linguistics Association has strong local organizations in several countries, and some of these local bodies organize regular child language conferences and others might be quite willing to start such activities. Another existing organization is the Association Européenne de Psycholinguistique (AEP) which sends out an (irregular) Newsletter, and also organizes large open meetings and small closed seminars. Another approachable organization is the International Organization of Child Language, which might well be interested in getting involved in a European initiative.

WORKSHOPS AND SEMINARS

Nothing has been suggested more often than to organize *small* workshops on specific topics. It was especially felt that workshops could have a crucial function in designing research projects, and that before starting any medium or large scale project one should assemble a small number of specialists to assess the "state of the art", to brain-storm about potentially fruitful research, and to talk about possible cooperation. These preparatory workshops should be, of course, rather theoretically inclined and the need for funding theoretical work prior to embarking on empirical studies was greatly stressed. But there was an equally general feeling that ongoing empirical research could benefit from workshops, since it is more realistic to encourage interaction between scientists who are already deeply involved in a particular issue, than to set up large scale European projects from scratch. Almost every conceivable topic has been mentioned to us as being deserving of a workshop. One of the most frequent topic suggestions was the acquisition of prosody and intonation as related to pragmatic functions, information distribution, and syntactic structure. One way to work on such issues would be to present a "bring-your-own-tapes" seminar for joint analyses of longitudinal single-case data. Cross-linguistic and cross-cultural comparison of conversational skills was also often suggested as a topic for workshops and cooperation. Another recurring proposal concerned sign language both from the linguistic and the educational and remedial points of view. The pedagogical taboo against the use of sign language in schools of the deaf is loosing its force and it is felt that a general reassessment should be made. In addition child bilingual ism has been repeatedly mentioned as a workshop theme.

TRAINING AND SUMMER SCHOOLS

There is a general need for advanced training. As one of our colleagues put it, "child language research should be seen as a *merger* of disciplines". Most European universities have no course in first language acquisition, and the young researcher in this area is quickly confronted with serious gaps in his or her knowledge. Depending on the original training, the gaps can be in linguistics, in psychology, in neurology, in the more technical aspects of phonetics, etc. Special

advanced training in issues such as morphology, pragmatics, cognitive development, suprasegmental phonetics, speech disorders (to mention just a few suggestions we received) can cover these areas of ignorance and at the same time bring together young researchers who are highly motivated to consider these issues. Some research councils have a program of (post) graduate research courses. The European Science Foundation has recently agreed to start a program of summer schools in linguistics which, of course, covers a wide area but surely does not exclude activities along these lines.

Another way for a researcher to obtain training is to spend an extended period at another institute or laboratory. This is probably the only feasible route to acquire competence in neurolinguistic aspects of child language, and it is certainly a very helpful way for acquiring skills in developmental phonetics and other areas which make intensive use of instrumentation.

"CLEARING HOUSE"

Many have raised the idea that there should be central filing places for different sorts of data. One recurring suggestion was the creation of a *tape pool* where video- and audiotapes of longitudinal acquisition studies would be available for anyone to study. To make this work, however, would require the availability of full and indexed transcripts of the filed tapes, and, of course, some spatial and technical facilities for visitors to work with them. Another proposal was to set up a *central reporting place for child language disorders.* This would work in two ways: on the one hand it would become possible for researchers to find special or unusual cases for testing certain theoretical issues, and also to locate the necessary control subjects for cross-linguistic comparative research. On the other hand, it would be one source of data on which the authorities could base their policy decisions with respect to remedial practice, teaching, etc. There are, however, rather serious difficulties to be expected, firstly because efforts to set up more local reporting places have met with great resistence, and secondly because regulations on protection of personal data make it increasingly hard to stay within the laws of all countries involved. Further "clearing house" suggestions were made with respect to existing *school projects, day-care-center projects,* as well as language

tests and norms for different languages. It was also proposed that *new research projects* should be announced centrally. The present inventory will rapidly become obsolete but a short announcement of new research projects in the AEP newsletter, for instance, will update the information continuously.

PUBLICATIONS

One of the great obstacles for the dissemination of scientific findings was felt to be the diversity of publication languages. Though it should not be a matter of principle, it is a matter of fact that the only language understood by almost all in the field is English. A far larger readership can be obtained if an article is written in English, and several colleagues have stressed that *funds for translation* would greatly help the research interaction within Europe.

Another reason for insufficient readership is that publications in child language scatter over an enormous range of journals. Important news here is that the Child Language Research Institute of the University of Stockholm (Box 6404, S-11382 Stockholm, Sweden) composes a yearly bibliography of articles and reviews on child language, for which 80 journals are scanned. The first review, 1976-1978, can be ordered now.

MISCELLANIA

The present inventory is, in part, the result of other suggestions made to us. Many colleagues asked for a list of researchers, of institutional addresses, of topics and types of ongoing research, etc. The decision to send out a questionnaire covering many of these issues arose largely as a result of these almost universally expressed needs.

3. THE RELEVANCE OF CROSS-LINGUISTIC COMPARISONS AND STUDY OF BILINGUALISM

It could be argued that the use of cross-linguistic data in the study of language acquisition is a luxury most researchers cannot afford and that a detailed study in one language can provide equally useful results. It is to be maintained here, however, that cross-linguistic comparison makes an essential contribution to the study of language acquisition, namely in the accomplishment of the two main aims of any study which are, firstly, to describe adequately the language produced by the child in the process of acquisition and secondly to account for this behaviour.

When attempting to describe the acquisition data of a particular language, it is inevitable that the kind of description formulated be affected by the hypothesized explanation to some extent. To take a hypothetical example, if the negation system of language A is to be studied in acquisition, it might well be assumed that the data should be described only in terms of structural rules such as the positioning of the negative particle, changes in the verb etc. In this case, the acquisition of the structural rules is seen as the task for the child in learning the negation system. If data are considered from language B, however, it emerges that different categories of negation are structurally marked in different ways, for example rejection or non-existence, and *are* acquired in different ways. Although language A may not mark such categories of negation distinctively, it could be the case that such categories do affect the acquisition of the structural principles, possibly that they are acquired in one category first for example. It would be necessary therefore to include a description of acquisition within such categories in language A, if only to be able to claim finally that they were irrelevant to the acquisition process in that language.

Information from other languages, therefore, is invaluable in opening the researcher's mind to alternative methods of description, even if data are to be collected in one language only. When it is seen that other aspects may be relevant to the area under study, the methods of collecting the data may also be affected. It is therefore important to take cross-linguistic data into account embarking even on monolingual research.

Clearly a superordinate goal of any acquisition study is to achieve, for the data in question, a description and explanation which have some generality. That is, the description and explanation are founded on principles and theories which have applicability beyond the set of data considered. A child is not born to learn a specific language but possesses the ability to learn any language and sometimes simultaneously more than one. The language learning behaviour of the child must be accountable for in terms of universal principles. It is not the intention here to enter upon a discussion of the form and specificity such universal principle might have, that has been done sufficiently elsewhere. It is the purpose of this argument to show that in order to achieve maximum generality, on whatever level, a comparison must be made with data from other languages. An explanation of any acquisition phenomena, however limited the set of data, must make ultimate reference to the general principle which underlies the learning, and such general principles, since they cannot be specific to a particular language, must be upheld in other languages.

It is possible to test some explanatory principles within one language. For example, the claim that singularity is acquired before plurality in the production of pronouns can be tested in English by testing the acquisition of I/we, and he/they. In such cases, it is still possible that alternative explanations could exist. The principle needs to be tested on a large number of languages to have any claim of general validity. Some explanatory principles cannot be tested within one language, and in such cases of course, cross-linguistic comparison is essential. For example, the proposal that word order is a less complex way of marking semantic relations than case marking and will be acquired first is impossible to test in a language such as English which has too few instances of case marking. Only by comparing acquisition in

languages which use both systems and contrasting languages which use predominantly one or the other, but always with careful evaluation of the use of the two systems with the languages, could such a proposal hope to be evaluated.

Cross-linguistic comparison can contribute to the evaluation of general principles in *every* area of acquisition. The following are just a few examples. In the area of phonology and prosody, it would be possible to investigate how quickly a child becomes sensitive to the kinds of systems which play a major role in his language. By comparing languages which use predominantly phonemic contrasts with languages which use phonemic and tone contrasts, it would be possible to determine whether all children use both types of contrast equally initially, whether one is acquired by all children before the other, etc.

In the area of morphology, the relevance in explanation of such a principle such as frequency of a form can be explored. By comparing languages with different properties, it may be possible to explore the significance of the different types of frequency, that is frequency within the paradigm, token frequency in adult usage, token frequency in the child's input etc. in their relationship to the acquisition of forms which are equal on other dimensions. For example, the Spanish plural form *-s* and the English plural form *-s* are both final, non-syllabic and unstressed but differ in their frequency within the plural paradigm. It could be investigated what effect this has on acquisition.

Cross-linguistic data are highly relevant in exploring the relationship of form and function in the acquisition of syntax. Through careful selection of structures and languages, it becomes possible to contrast the possible effects of form and function in acquisition. For example, if the possessive relationship is expressed in *one* language predominantly by preposition between the two related noun phrases and in another language by a prefix on the second noun, the effect of the formal status free and bound morpheme in acquisition can be explored.

If, to take a different kind of example, questions are used in one language predominantly to request information but in another to request information and to make commands, and the formal means to indicate questions appear to be of equal complexity in both languages, it can be investigated what effect the dual function in the one language has on the timing of acquisition in comparison with the other.

By comparing languages which have different lexical structure in the same semantic areas, general principles can be tested for the acquisition of the lexicon.

Cultures vary greatly in their perception of the main aims of discourse and also in the selection of pragmatic aspects to be taught to children. In Western civilization, a general emphasis appears to be laid, for example, on naming behaviour: in other cultures, far more emphasis is put on the development of social interaction in the form of teasing etc. By comparing the pragmatic functions acquired in different languages associated with different cultures, it can be investigated whether children have predispositions to certain pragmatic functions and to what extent these are affected by input.

The pragmatic functions first learned by the child may also influence the formal structures learned. By comparing the timing of acquisition of structures in different languages, with careful consideration naturally of the formal properties involved, the relevance of pragmatic function on acquisition can be assessed.

These issues are clearly related to the wider issue of the role of input in child language acquisition in general. Cross-linguistic comparison must make an important contribution here, since it becomes possible to examine the effects of many different kinds of input, although with the additional difficulty of allowing for formal differences. Nevertheless, many insights can be gained into the relevance of individual factors. It has been assumed, for example, that the use of third person nouns in adults speech to children instead of first and second person pronouns represented a simplification in the input. This simplification is linked to an assumption that it is cognitively more complex to use first and second person. When it is found by comparing use across languages that this simplification of input is not universal and that, in some languages, first and second person are always used with the child and are acquired therefore considerably earlier, it becomes necessary to reexamine the assumptions of simplicity and complexity and reassess the importance of input.

In general, where the relationship between cognition and language development is the object of investigation, cross-linguistic data are important. By testing the cognitive development in a particular area

and comparing it with the language development in that area where the concepts are expressed in formally quite different systems, the interaction of cognitive and linguistic variables can be assessed in far more detail.

The above examples illustrate only a few of the ways in which the use of acquisition data from different languages is both useful and often essential. It was pointed out at the beginning of this discussion that data from other languages are important to achieve generality in formulating principles of acquisition. This is relevant even if an investigation is to be carried out in one language only. Frequently however the researcher knows in advance that it is not going to be possible to choose between several possible explanations because the language concerned offers no test case. By checking other languages, it is often possible to find a test case, that is where only one explanation will fit both sets of data. This is the ideal situation in which to plan cross-linguistic work so that the data are collected, whether longitudinally or by experimentation, from the languages concerned to allow as strict a test of the hypotheses as possible. The planning and carrying out of such research obviously relies on international discussion and cooperation.

All of the issues raised in the preceding paragraphs regarding the importance of cross-linguistic comparisons between different children hold, of course, for bilingual children. It has already been stated that Europe is a particularly rich scene for research in the development of bilingualism. However, it should naturally be stressed that the line between true bilingualism and that of second language learning is often difficult if not impossible to draw. Nonetheless, with the many interesting linguistic frontiers which exist in Europe, where children grow up learning naturally more than one language, up to the other extreme of the older child arriving as part of a foreign worker's family to be schooled in a language quite distinct from her/his already fluent mother tongue, much research is still required. Such research can address both the theoretical and the socially-oriented questions raised in the above paragraphs and can serve as a particularly rich source of comparison with cross-linguistic studies of different children.

4. REMEDIAL PRACTICE, THERAPY AND EDUCATION

The rather scattered scene in European child language research is particularly disastrous for those who work in applied areas of child language. Speech therapists, clinical psychologists, remedial teachers and linguists in schools for the deaf quite generally suffer from insufficient interaction with other such specialists in the same country or in other countries, and from an almost structural lack of contact with psycholinguistic research in language acquisition. Speech therapists, for instance, have their training, and also much of their later practice in a predominantly medical setting and, not surprisingly, often lack the necessary psycholinguistic background for relating their work to whatever they might read in the Journal of Child Language or similar sources. Though the degree and type of isolation differs from country *to* country, it can be observed everywhere, and it is a regrettable state of affairs; it not only results in practice lagging behind theory more than is necessary, but it also keeps potentially important experience and observations hidden from the view of professional researchers. An example of the former is the still quite general prohibition on the use of sign languages in the education of the deaf (Sweden is a noteworthy exception here), for which there is no sane basis in recent psycholinguistic theory. One example of the latter is the neglect by students of child language of language acquisition in the blind, a potentially rich source of information about the role of visual feedback in the acquisition of articulatory patterns, the semantics and syntax of verbs of perception, conversational skills, etc.

Apart from these general observations, we have not been able to develop a clear picture of the European state of affairs in this field. In fact, we feel that our contacts with those colleagues in medicine,

clinical practice, therapy and education have been insufficient. In spite of serious efforts on our side, their research is unlikely to be fully represented in the tables of this inventory. Nonetheless they are by no means absent from these pages; and we did receive several suggestions for necessary research cooperation. Let us mention a few.

It was generally felt by those colleagues we did meet that the availability and cross-linguistic comparability of acquisition *norms* should be improved. There are versions of the Illinois Test of Psycholinguistic Abilities (ITPA) available for Danish, Dutch, English, Finnish, German and Norwegian, and a similar test, TALB for Italian. But these adapted versions have not made it possible to achieve comparability across languages. So, it would be most helpful, at least for some selected and theoretically well-understood targets in the reference grammar and in conversational skills, if tests could become available which would allow for cross-language comparisons. This development would also create more confidence amongst teachers who work with language-handicapped children.

Another suggestion made is a *central reporting house* for language disorders (cf chapter on Ways of cooperation). Such an initiative would, evidently, require the development of a *taxonomy* of language disorders. There is, as yet, very little common ground here, especially where psycholinguistic distinctions within the group of neurologically disordered children are concerned, not to mention the correlation of such distinctions with the medical diagnosis. A workshop for the development of psycholinguistic/medical criteria for children with brain injury was one of the suggestions made in this regard.

A recurring issue was the description and explanation of *retarded speech.* Several, quite divergent, clinical groups, such as mentally retarded esp. Downsyndrome children, autistic children, cleft palate children, children with retarded lateralization, etc. show patterns of delayed language acquisition. The main theoretical issue is whether acquisition is just slower or whether the processes of acquisition are also different for these children. If they are different, it must be investigated how the specific strategies of acquisition are related to the particular clinical situation of the child. Here it was felt that not only good statistical evidence, but also in-depth single-case longitudinal studies should be used in combination with cross-language

comparisons. The latter would give a certain degree of control over what is specifically linguistic in the disorder and what is due to more general cognitive disorders; it would also give a check for culture- and language-specific conversational skills, which may well differ substantially between different speech communities. More insight into the etiology of delayed acquisition will, hopefully, lead to the development of more sophisticated *teaching materials,* and more direct involvement of the family in the therapeutic process.

Related to this issue was a general concern with what might be called *"phonetic competence"* in speech-retarded children. There is a rather general hiatus in our knowledge of the (normal) child's acquisition of speech sound production and perception. This gap is especially noticeable where speech disordered children are concerned. It is particularly unclear to what degree sound production difficulties originate from perceptual inabilities, such as weakness in perceptual sequencing, perceptual processing at high rates, general insensitivity to pitch variation in speech, lack of categorical consonant distinctions, etc. Again, comparisons between languages that differ in the grammatical and pragmatic functions of intonation would help the understanding of these issues.

Also related to the issue of retarded development was the repeated suggestion about the possible role of *pragmatic development.* In so far as pragmatic development functions as a "pace-maker", or at least is a precondition for the normal acquisition of language, delayed or different development of pragmatic functions in a child may, indirectly, be a determinant of retarded speech. This suggestion is particularly relevant for the case of autistic children, but pragmatic functions may equally well develop differently in deaf, blind, and other types of handicapped children. It was even suggested that inadequate mastery of the pragmatic functions of language could be a determinant of delayed acquisition of writing and composition.

Finally, we want to mention one more issue about which much concern was expressed. As will become clear from the questionnaire data, work has been done in several countries on *the child in a bilingual situation.* In part, this concerns children whose dialect differs substantially from the school language, and in part children who have a totally different language as mother tongue. Many of the latter children are foreign

workers' children who not only have to adapt linguistically, but also culturally. One finding is common in all of these studies: (second) language acquisition is not unproblematic for any of these children, and it is *very* problematic for a substantial proportion of them. It is of great scientific and social importance that researchers in this area cooperate and compare the methods and results of this work much more intensively than they have done until now. Also, it is necessary to feed back research findings to teachers as effectively as possible, since teachers are, generally, totally in the dark as far as the education of bilingual children is concerned so that terrible misunderstandings abound (for example, that the mother tongue has to be suppressed in order to acquire the new language).

5. SOME QUESTIONNAIRE FINDINGS

We have no statistical evidence about the completeness or representativeness of the questionnaire results. Nonetheless we are confident that a very acceptable degree of comprehensiveness has been attained. In the course of a year we have slowly but systematically built up our address file. Initially this was done by writing to colleagues and departments in Europe. Secondly, the local meetings we held in different countries provided us with much additional address information. Thirdly, some of us made site visits in areas where too little information had come from, and often discovered child language researchers whose only contact with the scientific world had been through books and journals (see chapter 1 for more details about these phases of data collection). Finally, when we sent the questionnaire around (in June 1980), we included two additional copies in each envelope to be handed on to other colleagues. We sent the questionnaire to 1190 addresses and the return was 532 completed forms, relating to 708 different research projects, and 330 (mostly institutional) addresses. We do think that we have covered a large majority of the on-going child language research in Europe. It is clear from these numbers that research is enormously scattered, with an average of 1.6 researchers per (institutional) address. The number of projects in which the 532 respondents are involved may be larger than the 708 mentioned, since we only allowed for a maximum of 2 reportable projects per person. There are questionnaire returns from all ESF countries, with the regrettable exception of Portugal, where in spite of intense efforts we failed to contact local researchers[1)] Equally regrettably we had to omit occasional returns from non-ESF countries.

The following pages are an exact copy of the questionnaire as it was sent. We have, however, added a column "%" which gives the proportion of projects marked for that item (N = 708). It should be noted that these percentages are rounded off, so 0% means 3 or less projects.

ESF CHILD LANGUAGE RESEARCH QUESTIONNAIRE

Mark with "x" any item that is a main focus to your project. Too many crosses will not be informative.

1. TITLE OF PROJECTS

project 1:

project 2:

%	PROJECT 1	PROJECT 2	2. LINGUISTIC AREAS
13			2.1 phonetics and articulation
11			2.2 phonology
9			2.3 prosody
15			2.4 morphology
36			2.5 syntax
48			2.6 semantics and lexicon
36			2.7 pragmatics
11			2.8 metalinguistics
13			2.9 paralinguistics (gesture, etc)

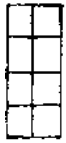
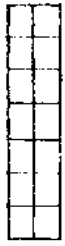
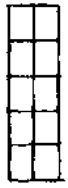
3. GRANMATICAL CATEGORIES AND FORMS

3.1 syntactic categories

9		3.1.1 auxiliaries
22		3.1.2 verbs
21		3.1.3 nouns
11		3.1.4 determiners
15		3.1.5 adjectives
10		3.1.6 adverbs
12		3.1.7 prepositions
7		3.1.8 particles
15		3.1.9 pronouns
11		3.1.10 connectives

3.2 syntactic forms

11		3.2.1 active/passive
10		3.2.2 negative
18		3.2.3 question/answer
8		3.2.4 imperative
10		3.2.5 relative clause
12		3.2.6 coordination

%		
12		3.2.7 subordination
9		3.2.8 ellipsis
4		3.2.9 compounding
17		3.2.10 word order
		3.3 morphological aspects of
8		3.3.1 gender
10		3.3.2 plural/singular
8		3.3.3 person
7		3.3.4 case
6		3.3.5 aspect
11		3.3.6 tense
4		3.3.7 other
		3.4 semantic categories
13		3.4.1 spatial expressions/markers
14		3.4.2 temporal "
7		3.4.3 intensional "
6		3.4.4 hypothetical "
9		3.4.5 causative "
7		3.4.6 conditional "
7		3.4.7 modal "
7		3.4.8 aspectual "
14		3.4.9 deictical
		4. LINGUISTIC FUNCTIONS
9		4.1 truth conditions (presupposition, implication, implicature)
29		4.2 speech acts (informing, requesting, etc)
22		4.3 information distribution (topic/comment, theme/rheme, given/new, frame/insert, focus)
33		4.4 referring (naming, indexing, deixis, anaphora, etc)
		5. MAIN UNIT OF ANALYSIS
13		5.1 speech sound
28		5.2 morpheme/word
39		5.3 phrase/sentence
34		5.4 conversational exchange
19		5.5 extended discourse

%		
		6. MULTILINGUAL ISSUES
13		6.1 cross-linguistic comparison / universals
10		6.2 bilingualism
10		6.3 second language learning/ teaching
6		6.4 language problems of migrant workers' children
5		6.5 dialect
		7. LANGUAGE SKILL AND MODALITY
42		7.1 perception/comprehension of spoken language
48		7.2 production/articulation of spoken language
15		7.3 reading
12		7.4 writing
9		7.5 verbal memory
5		7.6 usage of sign language
23		7.7 conversational skills (turn-taking, etc)
		8. RELATION TO PSYCHOLOGICAL VARIABLES
58		8.1 cognitive development
19		8.2 perception
16		8.3 memory
25		8.4 social skills
12		8.5 affect and emotion
7		8.6 personality
10		8.7 IQ
		9. INTERACTIONS
		child and
30		9.1 mother
14		9.2 father
17		9.3 teacher
33		9.4 experimenter
9		9.5 other adult
20		9.6 peer
4		9.7 younger sibling
4		9.8 older sibling
2		9.9 twin

%		10. METHOD
51		10.1 observational
53		10.2 experimental
17		10.3 interview
6		10.4 medical-clinical
31		10.5 longitudinal
25		10.6 cross-sectional
14		10.7 single case study
14		10.8 large scale survey study

11. SUBJECTS

11.1 type

76		11.1.1 normal native speakers of standard language
12		11.1.2 normal native speakers of minority language or dialect
7		11.1.3 deaf
2		11.1.4 blind
6		11.1.5 mentally retarded
6		11.1.6 aphasic
7		11.1.7 dyslexic
5		11.1.8 emotionally disturbed (autistic, etc)
8		11.1.9 other language disordered

11.2 age

10		11.2.1 0;0 - 0;5
14		11.2.2 0;6 - 0;11
21		11.2.3 1;0 - 1;11
26		11.2.4 3,0 - 2;11
31		11.2.5 3;0 - 3;11
46		11.2.6 4;0 - 5;11
50		11-?. o;0 - 9;11
32		11.2.8 10;0 - 18
18		11.2.9 adult control subjects

12. LANGUAGES

0		12.1 Basque
1		12.2 Catalonian
2		12.3 Danish
9		12.4 Dutch

%

32 12.5 English
3 12.6 Finnish
10 12.7 French
0 12.8 Fries
0 12.9 Gaelic
28 12.10 German
2 12.11 Greek
0 12.12 Icelandic
1 12.13 Irish
8 12.14 Italian
0 12.15 Ladino
3 12.16 Norwegian
0 12.17 Portugese
3 12.18 Sign Language (please specify:)
4 12.19 Serbo-Croatian
1 12.20 Slovenian
2 12.21 Spanish
5 12.22 Swedish
3 12.23 Turkish
0 12.24 Welsh
7 12.25 Other (please specify:)

13. GENERAL

Study is mainly concerned with

13 13.1 analysis of literature
32 13.2 norms and testing
13 13.3 neurolinguistic issues
23 13.4 sociolinguistic issues

14. NAME AND WORKING ADDRESS

14.1 personal name (first:) (second:)
14.2 institute/faculty/department (in full):

14.3 full institutional address
street and number:
town and postcode:
country:

15. PUBLICATIONS

(maximally two publicly available studies on child language. No reports or manuscripts, only printed articles or books).

1.

2.

16. REPORT ORDER

☐ Herewith, I order the final report.

17. OTHER CHIID LANGUAGE RESEARCHERS

List any persons who should also receive a questionnaire, but to whom you could not forward one.

18. DATE OF COMPLETION AND SIGNATURE

date: signature:

The percentage column gives a first general impression of the distribution and character of child language research in the ESF countries. In the following we will make a few comments on the different sections of the questionnaire, making occasional use of the inter-item tetrachoric correlations we computed (over projects), and a principal components factor analysis plus varimax rotation performed on a Pearson correlation matrix[2]. In the following all correlation coefficients mentioned are tetrachoric, and indicated by "r".

LINGUISTIC AREAS

Table 1 gives the correlations between linguistic areas. A relatively small number of projects concerns the acquisition of speech sounds.

Table 1: Correlations between linguistic areas

linguistic areas	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9
2.1 phonetics	.80	.56	.12	-.15	-.24	-.68	-.12	-.09
2.2 phonology	1.00	.45	.49	-.03	-.07	-.30	.06	-.26
2.3 prosody		1.00	.15	.13	.08	.07	-.24	.25
2.4 morphology			1.00	.68	.23	-.24	.00	-.22
2.5 syntax				1.00	.40	.07	-.01	-.15
2.6 semantics and lexicon					1.00	.20	.08	-.04
2.7 pragmatics						1.00	.11	.53
2.8 metalinguistics							1.00	.07
2.9 paralinguistics								1.00

There is a clear phonetics/phonology/prosody cluster in the correlation

table, and these speech sound interests tend to exhibit zero or even negative correlation with most other linguistic areas, with the exception of a link between phonology and morphology. It should be mentioned that this "island" situation is quite generally felt to be abnormal: in almost all local meetings and in various written reactions the point was expressed that much is to be gained from analyzing the child's articulatory and (sound) perceptual skills when studying syntactic, semantic, and pragmatic development. The strong negative correlation between phonetic and pragmatic interests in child language research is not a fact to be proud of.

A further cluster is a morphology/syntax one, which is positively related to semantic interests. The proportion of projects in these areas is quite substantial (15 and 36%, respectively for morphology and syntax). The same is true for the work in semantics and lexicon (48%). Pragmatics was marked for 36% of the projects, this area appears to be surprisingly isolated from the others: the only substantial correlation is with paralinguistics with which it forms a cluster.

SYNTACTIC CATEGORIES

The main interest here seems to be in the major grammatical categories: verbs, nouns, and adjectives, supplemented by pronouns. It may be noticed, however, that the first and main varimax-factor is a clear syntax/morphology factor, involving each of the syntactic categories, their intercorrelations all being > .69.

SYNTACTIC FORMS

The major interest here is in word order (17%). Except for item 3.2.9 (compounding) all items load substantially on the syntax/morphology factor.

MORPHOLOGICAL ASPECTS

Morphology is, apparently, one of the principal interests of European child language researchers. All morphology items, except for 3.3.5 (aspect) and 3.3.7 (other) load highly on the syntax/morphology factor. In summary, item sections 3.1, 3.2, and 3.3 clearly go together in the registered research interests.

SEMANTIC CATEGORIES

There is a rather substantial interest in spatial (13%) and temporal (14%) expressions. The items in section 3.4 are, moreover, highly correlated (the average of correlations is .72), with the exception of deixis (3.4.9), which seems to be an interest in itself. The other items form a clear factor in the varimax analysis. It is noteworthy that there is no *very* substantial relation to item 2.6 (semantics and lexicon).

LINGUISTIC FUNCTIONS

This is one of the *very* popular sections: 29% of the projects have to do with speech acts, 22% with information distribution, and no less than 33% with referring. The interests in the different functions do not overlap to any great extent: all intercorrelations are < .50. Work on truth conditions is only highly correlated with an interest in cognitive development (8.1). Speech acts (4.2) in its turn, clusters with pragmatics (2.7), subordination (3.2.7), ellipsis (3.2.8), conversational exchange (5.4), social skills (8.4), and mother (9.1). It is noteworthy that projects on speech acts do not show a great deal of interest in prosody. Information distribution (4.3) goes with (among other things) interests in pragmatics (2.7), relative clauses (3.2.5) and word order (3.2.10), as well as with a general interest in semantic categories (3.4), especially that of extended discourse (5.5). Information distribution and speech acts are, apparently, studied in quite different contexts. It is for the reader to interpret a strong negative correlation (-.73) between projects on information distribution and Swedish language.

Referring (4.4) has obvious relations to determiners (3.1.4), pronouns (3.1.9) and spatial expressions (3.4.1). A less trivial finding is that it is quite unusual to study referring functions by single case (10.7) methods (r = -.67).

MAIN UNITS OF ANALYSIS

In terms of units of analysis, least attention is given to speech sounds (13%), which clusters, obviously, with phonetics (2.1) and phonology (2.2), but there is an interesting connection with the few

studies of language acquisition in the blind (11.1.4). Noticeably seldom are speech sound acquisition studies of French (12.7) (r = -.47). Extended discourse is a topic of 19% of the projects. It is studied in the context of interests in pragmatics (2.7) and information distribution (4.3).

There are many morphological/word studies related to gender (3.3.1), which would make for a *very* interesting cross-linguistic comparison in Europe. Not surprisingly, the phrase/sentence level is mostly studied in the context of syntactic (2.5) interests, and much attention is, apparently, given to the acquisition of negation (3.2.2) and coordination (3.2.6) when one studies this level of units.

MULTILINGUAL ISSUES

Given the abundance of multilingual situations for children in ESF countries, the amount of research interest in these matters is relatively small. Bilingualism is a topic in no more than 10% of the projects; cross-linguistic comparison occurs in a mere 13%. This fully coincides with the impression we carried with us from almost all local meetings. Clearly, the rather unique European resources in this field are not fully exploited. The issue of bilingualism is strongly addressed in the context of Finnish (12.6), Serbo-Croatian (12.19), Spanish (12.21), Turkish (12.23), and to a lesser extent Greek (12.11). Clearly, the main context is that of migrant workers' children (6.4), with which it forms a cluster, together with language learning/teaching (6.3) (all correlations > .80). Index 4 lists the bilingual language combinations studied in the different projects. All in all, our impression is that the study of child bilingualism in the ESF countries arises from, and it motivated by, a relatively recent social problem, namely the scholastic problems of foreign workers' children. As compared to this type of research, the study of child bilingualism in *traditional* bilingual areas is small or negligible, although such areas presumably involve some 3 to 4% of the children in ESF countries. Scientifically speaking, this population should be given more serious attention, since it involves far fewer contaminating cultural factors than the foreign workers population, and would therefore at least be an important comparison group.

The interest in cross-linguistic comparison/universals (6.1) is

virtually uncorrelated with pragmatics (2.7), or with major research interests in speech acts (4.2) or any other linguistic function (4.1, 4.3, 4.4). Nevertheless, we found a quite wide-spread awareness that cross-linguistic comparisons in the area of linguistic functions would be *very* valuable: the acquisition, for instance, of requesting and politeness forms may vary substantially from culture to culture, and one wonders what is universal in the early use of indirect expressions. The other area deserving of greater attention, which has already been mentioned, is cross-linguistic comparison of prosody (r = -.03), again something many colleagues were quite aware of. Another area that needs development is the cross-linguistic comparison of the acquisition of orthographic systems, which vary widely in grapheme/phoneme correspondence between the ESF languages. At present, there is no positive correlation between interests in writing/reading (7.3 - 7.4) and cross-linguistic comparison.

LANGUAGE SKILL AND MODALITY

Clearly, in this category interests are equally distributed between receptive and productive language skills in the child (42% and 48%, respectively); they are, moreover, positively correlated (r = .60). Nonetheless, they do not form a clear cluster. Only the production projects show substantial concern for phonetics (2.1), phonology (2.2) and morphology (2.4), whereas this is absent for perceptual projects. There is, in other words, little interest in acoustic perceptual development. Given the rather limited interest in phonological/phonetic development, this lack of work in perceptual development is particularly noteworthy.

Reading (7.3) and writing (7.4) are also highly correlated (r = .89) research interests, which relate similarly to other items, especially to IQ-testing (8.7), and dyslexia (11.1.7). Not surprisingly, this research correlates positively with the child's age. Except for slightly positive correlations with sound structure, reading and writing studies are not noticeably related to either the linguistic areas of section 2, nor to any of the linguistic functions in section 4. They seem to be studied as independent skills.

Verbal memory, once the trademark of verbal behaviour research, is a topic in only 9% of the projects. Apart from an obvious relation to

memory (8.3), it has a notable correlation with the study of dyslexia (11.1.7). All other correlations are small or negative.

Sign language is one of the "small" (5%) research items in Europe. Its study correlates substantially with the study of paralinguistics (2.9), intensional (3.4.3) and deictical (3.4.9) expressions, speech acts (4.2) and referring (4.4). There is a negligible correlation with interests in morphology and syntax. Clearly, Europe is lagging behind the recent developments in the USA, as far as sign language research is concerned. The notable exception is Sweden, with a relatively large number of sign language studies. Apart from studies of the deaf, there are studies of sign language usage in emotionally disturbed children.

For the item on conversational skills we refer the reader to the discussion of item 5.4, conversational exchange, with which it is highly correlated.

RELATION TO PSYCHOLOGICAL VARIABLES

For no less than 58% of the projects cognitive development is marked as a major interest. This item is, apparently, not specific enough. The only other items it correlates with to any important extent are truth conditions (4.1), memory (8.3), and IQ (8.7).

Of all the other relations of items in this section one clear cluster which should be mentioned is that between work in social skills (8.4), affect and emotion (8.5), and personality (8.6), with a noticeable relation to IQ-issues (8.7). IQ maintains the expected relations with the mental testing syndrome: survey (10.8), retardates (11.1.5) and dyslexia (11.1.7), norms and testing (13.2) over and above the already mentioned connections.

INTERACTIONS

The distribution of interlocutors for the child speaks for itself. It is noteworthy that the interaction with the mother (9.1) forms a clear factor in the factor analysis, together with items such as the lower age levels, pragmatics (2.7), paralinguistics (2.9), observational (10.1) and longitudinal methods (10.5). The interaction with the mother is happily correlated with the father interaction ($r = .96$).

METHODS

The attitudes towards method are quite eclectic in Europe. On several occasions in the local meetings colleagues expressed the opinion that the method should be adapted to the problem, and that one should work towards theoretical convergence from different methodological approaches. This healthy point of view is reflected in the frequencies of the method items. Nevertheless, a few observations can be made. Firstly, we are not happy with the low number (6%) of medical/clinical projects. As was mentioned in chapter 4, we suspect that we have not been able to cover these studies sufficiently. Another omission that was pointed out to us is the absence of an item covering Artificial Intelligence. We know of colleagues who have built artificial language learning systems, but we do not know how wide-spread this is, though our impression is that this method is, as yet, highly exceptional in the study of child language.

The factor analysis yields a clear medical/clinical factor, involving method item 10.4 and items such as aphasic (11.1.6), emotionally disturbed (11.1.8) and neurolinguistic issues (13.3).

Earlier we observed that longitudinal methods are highly related to mother-child interaction studies. They also are concentrated in the low age levels. It is both remarkable and regrettable that studies involving extensive longitudinal corpora for the first phases in the acquisition of French are almost completely absent.

SUBJECTS

The large majority of projects concerns normal children. On the whole there is generally correlation between the handicapped groups, on account of a concern with diagnosis and remedial teaching. One observation is that the work on handicapped children is not evenly distributed over ESF countries. Sweden specializes in the deaf; Norwegian child language projects are in a large majority of cases projects on handicapped children of all denominations, and one wonders whether such a one-sided applied approach to the study of child language is scientifically healthy.

AGE

The distribution of age levels studied is quite even and does not need much comment over and above what has been mentioned in previous discussion.

LANGUAGES

For each of the 25 listed languages we found at least one project, with the exception of Fries. The zero's in the frequency listings are rounding-off zero's: in fact there are two projects involving Basque, and one each for Gaelic, Icelandic, Ladino, Portugese, and Welsh. For the listing of other languages (12.25) we refer the reader to Index 3, where 20 more languages are mentioned, among them east-European languages from India and Pakistan. Some of these languages, but especially Greek, Serbo-Croatian and Turkish, and to a somewhat lesser extent Finnish are frequently studied in the context of migrant workers' children.

We did not make it possible to specify dialects studied. However, some respondents mentioned dialects such as Swiss-German, Kerkrade-dialect, Alsacian, etc. among others. We have had to "correct" these responses, with apologies to our colleagues.

From the responses to these language items, we have also tried to derive information on the types of bilingual ism studied. The reader is referred to Index 4. Languages differ with respect to the major linguistic areas with which they are associated. Finnish, Turkish, Greek, Serbo-Croatian and Norwegian affiliate with morphology, while Serbo-Croatian moreover with semantics and lexicon, and French with metalinguistics. In contrast to all other languages,.French has marked ties with experimental methodology (10.2).

GENERAL

The study of literature is mentioned as a major topic for 13% of the projects. The only high correlations we find for this item are with particular languages: literature studies are apparently popular in relation to Danish and Serbo-Croatian. One literature project deserves special attention in the present inventory: Father Dr. Jungo of Einsiedeln, Switzerland, has built up an archive of literature on bilingual ism involving about 10.000 titles. Out of this material he has

composed bibliographies "für eine Didaktik der frühen Zweisprachigkeit" with several thousands of selected and systematized titles (see Index 5).

We have said enough about the norms and testing item above, the only additional observation to be made is that this item is especially marked for projects in Danish, Finnish, Norwegian and Serbo-Croatian.

The neurolinguistic issues are part of the medical/clinical cluster which was discussed earlier.

Finally, sociolinguistic issues is an item which clusters with interests in speech acts (4.2) and social skills (8.4). It receives special attention in projects on migrant workers' children and dialect studies.

The questionnaire data are comprehensively reported in the indexes. The next section explains how these are composed and how they can be used.