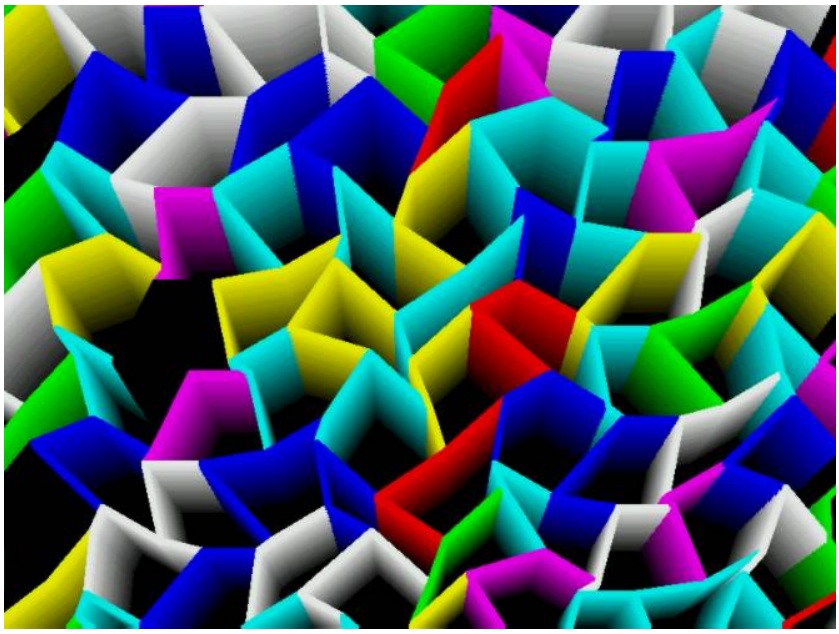
The Language Blueprint

The typology of spoken/written and sign languages



Proposal for an ACLC-UvA Research Program

Amsterdam, July 2002

For additional information contact:

Prof. Dr P.C. Hengeveld, programme director
Department of Theoretical Linguistics
University of Amsterdam
Spuistraat 210
NL-1012 VT Amsterdam
Tel 0205253854
Fax 0205253021
Email kees.hengeveld@hum.uva.nl

1. Variation

Natural languages exhibit a tremendous amount of variation. This variation manifests itself in all aspects of the structure of languages, in the ways languages convey meaning, and in the ways they are used. Any adult confronted with an unfamiliar language will have great difficulty in acquiring that language, let alone understand its structure. Yet any infant anywhere in the world, irrespective of its genetic descent, will learn the language it is exposed to without even being aware of its structure. The human language faculty is tremendously flexible, and accepts a whole array of systems. Nothwithstanding this enormous variety, languages show a remarkable degree of similarity, which takes the form of a set of common principles. These principles are called 'universals'. Together the set of universals defines the language blueprint: the basic layout of any system of human communication. The search for this blueprint is the major task of linguistics, and finding it a major prerequisite for improving language teaching, knowledge base construction, language therapy, and speech recognition, to mention just a few applications which crucially hinge on knowledge of language systems. This research program proposes a novel and integrated strategy to make a major breakthrough in finding this blueprint.

2. Universals

Universals may be uncovered by comparing languages in samples representative of the languages of the world. In linguistic typology, out of the approximately 6000 extant languages, samples of 25 up to 500 are taken in order to find out the extent to which variation in natural language systems is systematic. Over and over again it turns out that, when considered at a sufficiently abstract level, the variation as to possible language systems is severely restricted. In fact, studies in linguistic typology reveal that the differences between languages can be described in terms of a limited set of generalizations. These generalizations take the form of implicational hierarchies, which systematically define the range of variation allowed across languages. A simple example of an implicational hierarchy is the following:

m > n > nj

In general terms, a hierarchy predicts that if a language has a feature at a certain position within the hierarchy, it will also have the features which are located to the left of it in that hierarchy. Thus, the hierarchy above says that if a language uses the *n* as a meaningful sound, it will also use the *m* as a meaningful sound; and if it uses the *nj* as a meaningful sound, it it will also use the *n* and the *m* as meaningful sounds. The other way round, if a language does not use the *m* as a meaningful sound, it will not use the *n* and the *nj* either; etcetera. Thus, out of the many possible systems, only the following ones are actually attested:

1.	m	n	nj
2.	m	n	-
3.	m	-	-
4.	-	-	-

Implicational hierarchies are of course not restricted to sound systems, but apply at all levels of linguistic structure. The bulk of universals research has concentrated on phonology, morphology, and syntax, but more recently the area of semantics and particularly the lexicon has also come to the fore. Some examples will be provided in section 7 below.

3. Explanations

An important property of implicational hierarchies which follows from this brief description is that, all other things being equal, features more to the right on the hierarchy are less likely to occur in language systems. For every hierarchy, this increasing markedness of features requires an explanation. Explanations given to language universals make reference to cognitive restrictions (e.g. ease of processing, innate faculties, iconicity), communicative needs (e.g. saliency of information, disambiguation, economy) and circumstances of use (e.g. the nature of the speech event, the nature of the objects and events described).

The kind of explanation given to the existence of universals differs across theoretical frameworks. This has long been the major reason for the separate

development of research programs. But over the last decade there has been a convergence in research methods across frameworks, in that cross-linguistic comparison has become common to all. This means that the time is ripe for an integrated research program which produces testable results that can subsequently be interpreted within the various theoretical frameworks.

4. Spoken/written and sign languages

Normally typological samples are restricted to languages of the spoken/written modality and exclude sign languages. This is a rather unfortunate situation, since, in order to find the language blueprint, one wants to generalize across modalities and define universals at the highest level of abstraction. The exclusive attention for a particular modality may blur our understanding of the truly universal properties of language. There is no doubt that it is only at the highest level of generalization that we can find the principles that are responsible for the tremendous facility with which human beings communicate by means of language.

The independent status of languages with different modalities is evident even from a superficial comparison of Dutch and Sign Language of The Netherlands. For many features, Sign Language of the Netherlands has much more in common with North American Indian languages than with Dutch. For other features, it is much more like Polynesian languages than like Dutch. And in those areas in which Sign Language of the Netherlands shares properties with Dutch, this is most probably the result of language contact, rather than of intrinsic relatedness.

Just as there are large differences between the spoken/written languages of the world, there are also enormous differences between the sign languages of the world. It is to be expected that the modality used restricts the variation in spoken/written languages on the one hand and in sign languages on the other. In our search for the language blueprint we have to exclude the modality-specific restrictions in order to arrive at the truly universal features of language.

5. In search of the language blueprint

For the reasons described in the previous section, this research program starts from a systematic comparison of representative samples of spoken/written and sign languages. From this comparison cross-modality generalizations in the form of implicational hierarchies are derived, which are more likely to capture universals than single-modality statements, since they apply at the highest level of abstraction. This is our first access to the language blueprint. But in order for our search to be successful, we need to take a second step, to which we will turn next.

A language blueprint, in the form of universal statements, based on the systematic comparison of spoken/written and sign languages, and explained in terms of extra-linguistic factors as sketched above, should be capable of describing any type of variation, and not only cross-linguistic variation. For if the explanations provided for cross-linguistic cross-modality variation are adequate, the resulting language blueprint should put constraints on the degree of linguistic variation irrespective of the nature of the facts to be described. The universals derived from cross-linguistic comparison should therefore be tested against other types of variation, all of them intra-linguistic.

If these assumptions are correct, the following constraints on variability should hold for various types of intra-linguistic variation. The study of these types of variation is our second access to the language blueprint.

Variation in time

Language systems change over time and thus develop into new systems. The changes may be internal, i.e. resulting from pressure within the language system, or external, i.e. induced by contact with other languages. In both cases the changes within an existing language system should lead to a new system that is compatible with the language blueprint. Therefore diachrony should mirror typology, in the sense that language change occurs along the same implicational hierarchies as the ones describing crosslinguistic variation.

Variation in space

Language systems show varieties across the territory in which they are spoken/written or signed. Depending on the degree of relatedness they can be

classified in groups of dialects and/or sociolects and in groups of areally or genetically languages. Since the differences within closely related dialects, sociolects and languages are minimal, and each language system should be compatible with the language blueprint, we may expect that these differences can be defined along the same implicational hierarchies as the ones describing crosslinguistic variation.

Variation in acquisition

Both individual language users and entire speech communities may acquire a language system. In the case of individual language users acquiring a first or a second language, the target language is acquired passing through numerous intermediate stages. Each of these intermediate stages should represent a system that is consistent with the language blueprint, and every change should lead to a system that is again compatible with that blueprint. Thus, language acquisition in the individual language user should develop along the lines of the hierarchies defining the language blueprint. There are also cases in which an entire speech community acquires a new language. This happens when groups of speakers with different linguistic backgrounds unfamiliar with the languages of the other groups are forced to communicate among each other for economic or other reasons. In these circumstances pidgins develop, which in the course of time may grow into full fledged creole languages. Again, the development from pidgin to creole should be consistent with the language blueprint and the implicational hierarchies on which it is based.

Variation in language loss

Language loss, too, occurs both within individuals and within speech communities. The language system of patients suffering from aphasia show different degrees of language loss. One would expect these degrees of language loss to exhibit variation that can be described in terms of cross-linguistically valid implicational hierarchies. Entire speech communities may gradually loose their (former) first language in the process of language attrition, which occurs when a community feels forced to take over a dominant language, often for economic reasons. One expects this process to be inversely related to the emergence of creole languages, and thus to be compatible with universal restrictions on possible language systems.

6. Interim Summary

What has been said so far may now be summarized as in Figure 1.

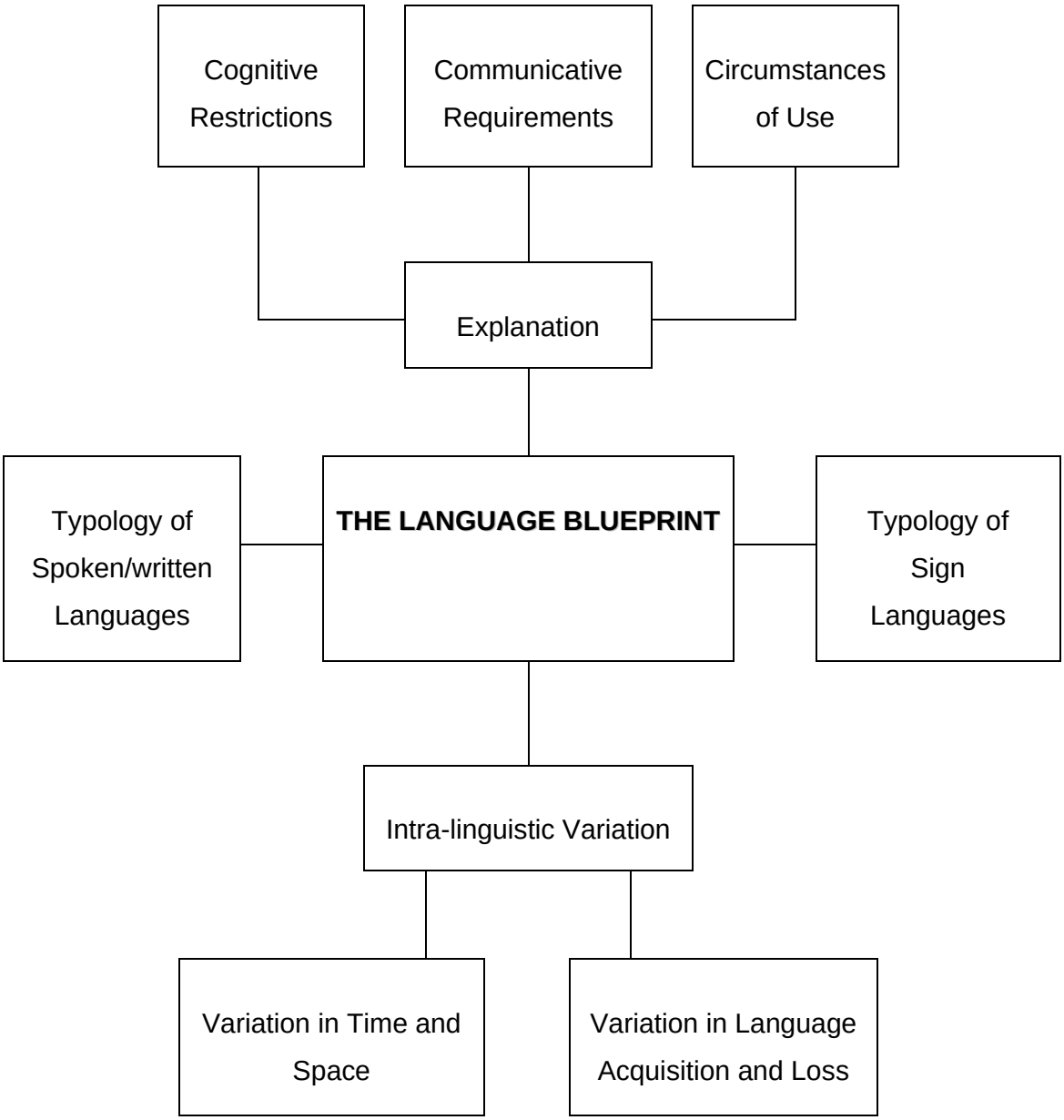


Figure 1

7. The project

The aim of the project may now be defined as follows: to uncover the crucial properties of the language blueprint by combining the study of cross-linguistic cross-modality variation with the study of intra-linguistic variation in any of the senses discussed above. In order to meet this aim research teams consisting of specialists from each or a substantial subset of the research areas mentioned above investigate a selected number of topics in order to find out the universal restrictions on cross-linguistic and intra-linguistic variation. Four such research areas are presented here in order to illustrate this approach.

Parts-of-speech

Consider the following universal, which is assumed to hold for languages of both the spoken/written and the sign modality:

V > N > Adj > MAdv

This hierarchy should be read as follows: If a language has an opposition between manner adverbs (MAdv) and adjectives (Adj), it also has an opposition between adjectives and nouns (N) and between nouns and verbs (V). If a language has an opposition between adjectives and nouns, it also has an opposition between nouns and verbs. Conversely, if a languages has no opposition between verbs and nouns, it will neither have an opposition between nouns and adjectives, nor between adjectives and manner adverbs, etc.

Explanations for these facts may refer to the acts of reference and predication (communicative requirements), to the embedded (syntactic) positions of adjectives and adverbs (cognitive restrictions), or to the saliency of individuals and actions versus properties and circumstances in our perception of the world (circumstances of use). These different explanations may lead to different theories.

Whatever the explanations and the theory, the cross-linguistically based implicational hierarchy, if it is of sufficient generality to qualify as part of the language blueprint, should be equally capable of handling the variation phenomena mentioned earlier. Given that the more to the right a category/opposition is positioned in the

hierarchy, the less likely it is to occur, and vice versa, we might, formulate the following hypotheses:

Variation in Time: parts-of-speech oppositions (if not available within a language at a certain stage of its development) are introduced into a language from left to right in the course of time. This has in fact been hypothesized for the history of the Indo-European languages.

Variation in Space: dialectal differences with respect to the availability of parts-of-speech oppositions concern contiguous categories on the hierarchy. This is, for instance, true for the dialects of English, where some do, and some do not, distinguish between adjectives and adverbs.

First Language Acquisition: parts-of-speech oppositions more to the left on the hierarchy are acquired earlier than those more to the right. In the earliest stages infants do not seem to distinguish parts of speech at all.

Emergence of Creole languages: language systems start out without any parts-of-speech oppositions and gradually integrate them from left to right. Creole languages are cited as examples of languages with weakly developed parts-of-speech distinctions.

Second Language Acquisition: the typological distance between the mother tongue and the target language as regards parts-of-speech oppositions is bridged from left to right. Although not unlikely, this is at this stage a mere working hypothesis, since no research has been conducted in this area.

Language Loss: in aphasia, parts-of-speech oppositions more to the right are absent more often from the patient's language than those more to the left..

Language Attrition: parts-of-speech oppositions more to the right disappear earlier from the language system than those more to the left. Although this issue has not been investigated systematically, it will not sound unreasonable to those who have been confronted with eroded forms of language.

Sonority

Consider the following universal:

a > o > u > r > l > m > v > f > b > p

This hierarchy expresses the suitability of ten speech sounds to act as a vowel, i.e. to be the nucleus of a syllable. For instance, if /paut/ is a single syllable, it will be the /a/ that bears the syllable, i.e. the pronunciation is [pawt], with /u/ playing the role of a consonant. Likewise, in both /pult/ and /plut/, the /u/, rather than the /l/, will act as the syllable-bearing vowel. In the Czech word /zmrzlína/ 'ice cream', the vowel in the first syllable is /r/, not /m/. The hierarchy is also an implicational hierarchy that should be read as follows: if a language allows the phoneme /m/ to be the nucleus of a syllable, then it also allows /l/ (and /r/, /u/, /o/, and /a/) to be the nucleus of a syllable. Conversely, if a language does not allow /r/ to be syllabic, then it does not allow /l/ (and /m/, /v/, /f/, /b/, and /p/) to bear a syllable either. Thus, Dutch allows {aou} but not {rlmvfbp} as vowels, Croatian allows {aour} but not {lmvfbp}, Czech allows {aourl} but not {mvfbp}, Proto-Indo-European presumably allowed {aourlm} but not {vfbp}. Finally, Tashlhiyt Berber allows all of these phonemes to acts as vowels, with a clear order of preference that follows the above sequence.

Explanations for these facts may refer to an innate hierarchy of phoneme categories, or to the appropriateness of these phonemes for carrying out vowel tasks such as the implementation of stress (for which they have to be loud and available for lengthening) or the implementation of tone contrasts (for which their voicing should be as audible as possible). These different explanations may lead to different theories.

Whatever the explanations and the theory, the sonority hierarchy, if it is to qualify as part of the language blueprint, should be capable of handling the variation phenomena mentioned earlier. Given that the more to the right a phoneme is in the hierarchy, the less likely it is to act as a vowel, we may formulate the following hypotheses:

Variation in time: syllable-bearing capabilities are introduced from left to right. Old English had no syllabic consonants, modern American English has /r/ as in <bird> but not syllabic /l/ or /m/ (at least in stressed syllables). Also, syllable-bearing capabilities are lost from right to left. Proto-Indo-European had syllabic {rlm}, but Sanskrit changed syllabic /m/ to /a/, leaving only {rl}. Czech used to have {rlm} as well, but inserted a vowel before syllabic /m/ (sedm -> sedum), leaving only syllabic {rl} as in /prst/ and /vlk/.

Variation in space: syllable-bearing capabilities are borrowed from left to right. If words from language A, which has syllabic {rlm}, are borrowed into language B,

then the first syllabic consonant that will be integrated into the system of language B is /r/, the second is /l/, the third is /m/.

First Language Acquisition: syllable bearers more to the left in the hierarchy are acquired earlier than those more to the right. An adult-like pronunciation of Czech /prst/ should be acquired earlier than that of /vlk/.

Emergence of Creole Languages: language systems should start out with only the most vowel-like vowels (perhaps {aou}) and gradually add /r/, /l/, /m/, and so on, in that order.

Second Language Acquisition: the typological distance between the mother tongue and the target language is bridged from left to right. Thus, the syllabic resonant in Czech /prst/ should be acquired earlier by Dutch learners than that in /vlk/.

Language Loss: in dementia, the syllabicity of /l/ in Czech /vlk/ should be lost earlier than that in /prst/. Likewise, the first vowel to be lost in American English should be the /r/ in <bird>.

Language Attrition: syllable bearers more to the right disappear earlier from the language system than those more to the left. A dying language with syllabic {rlm} will first lose syllabic /m/, then syllabic /l/, then syllabic /r/.

Some evidence is available on some of these hypotheses, and more evidence has to be found, in favour or against. The extent to which all of these hypotheses are correct, will shed light on the question which of the various possible explanations for the sonority hierarchy is correct. The next step would then be to investigate whether the explanation arrived at makes predictions about the distribution of hand forms in the 'phonology' of sign languages.

Case

Consider the following universal:

Nominative > Accusative > Dative > Genitive

This hierarchy makes claims about the possible morphological systems of natural languages in a way similar to the implicational hierarchies discussed above: a language with genitive case will have dative, accusative and nominative case as well, whereas there cannot be a language with dative case that does not have accusative

and nominative case, etc. Explanations for this hierarchy may be given in terms of features that underlie the case system: notions like nominative, accusative etc. consist of bundles of features, and if we move from left to right in the implicational hierarchy features are added.

This hierarchy has consequences that go beyond morphology. The reason is that morphological case distinctions correlate with syntactic properties. A classical example in this respect is the way in which the presence of case morphology allows a language to have a relatively free word order compared to a language without such a morphology (say classical Latin versus modern Dutch). Many other correlations of this type have been claimed to exist. If we combine this with the above morphological universal, the implication is that the extension of the case system from left to right goes hand in hand with the addition of syntactic properties. Accordingly, we can formulate hypotheses for several domains of linguistic inquiry:

Variation in Time: It is predicted that morphological cases, along with their syntactic properties, come into existence from left to right, and disappear from right to left. The latter hypothesis can be tested in detail for the Germanic languages. For instance, Middle Dutch still had a system with all the cases mentioned in the implicational hierarchy, whereas modern Dutch does not have such distinctions anymore.

Variation in Space: Similarly, dialectal differences in case should be explained in terms of the hierarchy. For instance, German dialects which still have a dative case, are claimed to have an accusative case as well – and again, this should correlate with syntactic properties (for example, direct objects and indirect objects should have a fixed order in languages without dative case, whereas they can scramble in languages with dative case).

First Language Acquisition: Acquisition of case should proceed from left to right and should go hand in hand with the acquisition of syntactic constructions. This can be tested, for example, for Germanic languages like German and Icelandic. For example, a German child should acquire accusative before dative, and if she did not acquire the distinction between accusative and dative yet she should not scramble direct and indirect objects.

Emergence of Creole Languages: A new language is predicted not to have a case system that goes beyond a nominative and neither should it have the syntactic

properties that go along with accusative, dative and genitive. This should be true even if the contact languages have a case system.

Second Language Acquisition: If second language acquirers use the system of the mother tongue as their starting point, we may expect that they approach the case system of the second language accordingly via the implicational universal. Alternatively, it has been claimed that universals of the kind discussed here do not guide the acquisition of a second language if it takes place after the critical period for language acquisition. Obviously, this would imply that the process of acquisition follows a different route.

Language Loss: There is evidence that in particular forms of language loss the flexional system of a grammar is suppressed. The prediction is that the resulting system will obey the universal discussed here, i.e. there will not be a system with dative but no accusative etc. Again, the prediction is that absence or presence of case co-occurs with syntactic characteristics.

Lexical Structure

Consider the following universal, known in the literature as the Animacy Hierarchy:

human					>	*non-human animate*			>	*inanimate*		
kin	>	body parts	>	other human	>	pet	>	other non-human animate	>	inanimate force	>	other inanimate

Unlike the hierarchies presented earlier, this hierarchy is the driving force behind quite a number of linguistic operations, since it is semantically based and contains categories which are relevant in various domains of grammar. Previous research has shown this hierarchy to be relevant to operations as diverse as case marking, passivization, pluralization, possessive marking, and pronominalization. For some languages, such as the Algonquian languages spoken in Canada, the entire grammatical system hinges crucially on the notion of animacy. In sign languages the notion of control determines large part of the grammatical system. But in less extreme cases the hierarchy is relevant, too. For instance, quite a number of languages require the use of accusative case marking for direct objects referring to human entities and pets, but not for direct objects referring to other kinds of entity.

Similarly, the use of plural forms for nouns may be restricted to e.g. human and non-human animate entities.

Explanations for parts of the hierarchy may refer to the saliency of humans in our perception of the world (cognitive requirements), or to degrees of control of entity types (circumstances of use). These different explanations may lead to different theories, with a cognitive and semantic basis, respectively.

But whatever the explanations and the theory, the cross-linguistically based implicational hierarchy should be capable of handling all kinds of variation phenomena. Given that the more to the right a category is in the hierarchy, the less likely it is that one of the operations mentioned will occur, and vice versa, we may, by way of examples, formulate the following hypotheses:

Variation in Time: number distinctions (singular, dual, plural, associative) of nouns are introduced into a language from left to right in the course of time. Initial evidence for this hypothesis is that human group-markers such as *-guys* in American English *you-guys* tend to become reinterpreted as general plural markers in the course of time.

Variation in Space: the degree to which languages apply constructions of inalienable/alienable possession varies across dialectal varieties of languages according to the Animacy Hierarchy, where kin terms and body part terms are increasingly liable to be expressed by means of a special inalienable possession construction.

Language Acquisition: language acquisition studies have shown that syntagmatic (associative) relations between lexical items are acquirted earlier than paradigmatic (systematic) relations between lexical items. Thus the relation between *tree* and *park* (syntagmatic) is acquired before the relation between *tree* and *shrub*. It is to be expected that paradigmatic relations, which are acquired later, are acquired from left to right on the Anmimacy Hierarchy.

Language Loss: recoverability of nouns in patients suffering from aphasia may be hypothesized to be more strongly affected from left to right on the hierarchy. So in recognition tasks one would expect words like *man* and *woman* relatively easy to retrieve, whereas words like *suitcase* and *piano* would be more easy to retrieve.

8. Linguistics at the University of Amsterdam

The University of Amsterdam is the appropriate institution to engage in an ambitious programme as described in this proposal, since it is virtually unique in the world in the fact that it has specialists in all important subareas of linguistics among its staff. This breadth of linguistic coverage is reflected in linguistics programs that are offered to students. Consider the following list of full MA-specializations that will be offered as of 2003:

Arabic Linguistics
Dutch as a Second Language
Dutch Linguistics
English Linguistics
French Linguistics
Functional Grammar
German Linguistics
Italian Linguistics
Language Acquisition
Language Pathology
Language Technology
Language Variation and Change
Latin and Greek Linguistics
Scandinavian Linguistics
Sign Linguistics
Slavic Linguistics
Sociolinguistics and Creole Studies
Spanish Linguistics
Speech Communication and Speech Technology
Theoretical Linguistics

The ACLC research program reflects the same breadth of subdisciplines, and covers more languages than those for which there are full MA-specializations in Linguistics. ACLC furthermore unites researchers with different theoretical persuasions, i.e. with different views on the explanation of language universals.

9. Excellence

Linguistics in The Netherlands is famous among linguists worldwide for both the size and quality of its research programs. Its participation in international organizations, linguistics editing and in hosting international events is very high. Many dutch linguists have been appointed over the years in university and research positions all over the world, often to the regret of the Dutch universities that would have liked to keep them. Within The Netherlands, the University of Amsterdam ranks at the top again. In 1998, in the national research exercise in The Netherlands organized by the Dutch Organization of Dutch Universities (VSNU), the University of Amsterdam's linguistics research was judged in overall terms as 'good to excellent'. Its long-term viability and its integration into the international state of the art were judged to be excellent. Only four years later, in March 2002, a citation study by Leyden University's CWTS revealed that the University of Amsterdam is the highest ranking university in The Netherlands as regards Linguistics and Literary Studies.

The University of Amsterdam's fame in the area of linguistics is also reflected in students in Linguistics' participation at the MA level, which is by far the highest within The Netherlands, to the extent that the MA students at the University of Amsterdam outnumber the MA students at all other universities in The Netherlands taken together. The recent conversion of the University of Amsterdam's programme in Linguistics into an English-taught international programme is leading to an increasing participation of highly qualified international students.

It will be clear from the above that the envisaged project would both strengthen and reaffirm the existing richness of Linguistics at the University of Amsterdam. Inversely, given the research orientation of ACLC, only at the University of Amsterdam the envisaged research program could be successfully implemented. Evidence for this claim may be found in the annual reports of the Amsterdam Center for Language and Communication (ACLC), which list all publications by ACLC researchers and show their strong presence in highly-valued international journals and in the cataloges of well-respected publishing houses. Further evidence may be derived from the strong presence of ACLC researchers in national and international research enterprises, which are presented in the next section.

10. National and international collaboration

The following national and international collaborative research enterprises give an impression of the past and present involvement of current ACLC-researchers (tasks and names between brackets) in large-scale research projects: ESF Project *Eurotyp* (Bakker, de Groot, Hengeveld); ESF Project *Intersign* (Baker (chair)); EU Project *Language Typology Resourse Center* (Bakker, de Groot, Hengeveld (chair), Salzmann); INTAS Project *Spontaneous speech of typologically unrelated languages* (Pols, van Son); Harvard/UCLA/Fairfax/LOT Project *Vocabulary Improvement* (Schoonen); NWO/NFWO Project *Syntactische Atlas van Nederlandse Dialecten* (Bennis (chair), den Besten); NWO/LOT Project *Linguistic Database System* (Bakker, Hengeveld (chair), Weerman); NWO Project *Dyslexia* (Koopmans-van Beijnum); NWO Project *Visibase* (Baker (chair)); NWO 'Vernieuwingsimpuls' *Adequacy and acquisition of functional constraints grammar* (Boersma); NWO Spinoza Typological Database Project (Hengeveld).

11. Output

The research programme, when fully financed, leads to at least nine PhD theses, six monographs (one on each of the research themes), and numerous articles. Just as importantly, the programme as a new research strategy produces a coherent and integrated framework within which for many years to come researchers from various subdisciplines can join their specialized results to arrive at more far-reaching conclusions.

12. Organization

The succesful implementation of a research programme such as the one proposed here requires the close collaboration of specialists from various linguistic subdisciplines. This is achieved in the following way. For each of the topics listed

above (and possibly more, see below) a research team is formed. Each research team investigates the topic from as many angles as possible, including at least an interlinguistic and an intralinguistic angle, and taking into account data from both spoken/written and sign languages. The research team is headed by a project coordinator, a senior ACLC staff member who furthermore forms part of the board of the programme.

The envisaged members of the research teams are partly tenured ACLC researchers, partly newly appointed investigators, and partly research assistants. The quality of the programme is enhanced further by inviting foreign scholars for short stays, and by organizing expert meetings. An outstanding candidate will furthermore be proposed for a honorary UvA professorship, with the specific aim of contributing to the programme. Finally, an International Advisory Board will monitor the programme and will take care of annual evaluations.

During the initial period of five years, the programme will have a project-like organization in order to allow it to set up a new research methodology and to create thematic rather than disciplinary forms of collaboration. The aim, however, is to gradually integrate this collaborative approach within the general ACLC research enterprise. The participation of the scientific director of ACLC in the programme board will help to achieve this integration.

13. Staff

From among the current ACLC staff a number of researchers will be selected who can contribute directly to the aims of the programme within one of the research teams. It is to be expected that for each theme three to four current researchers can be selected. For the four research teams these researchers will together contribute 3.2 fte research time. From among these researchers the following will act as coordinators of the research teams:

Flection	Prof. Dr Fred Weerman
Lexical Structure	Dr Rob Schoonen
Parts-of-speech systems	Prof. Dr Kees Hengeveld
Syllable Structure	Dr Paul Boersma

The programme board will make it a priority task to obtain additional funding from NWO in order to start new research teams on two additional topics.

In order to attain the ambitious aims of the programme, the strength and size of the existing research groups has to be expanded with newly appointed researchers. Given the aims of the programme and the availability of current ACLC-staff members, new appointments are first of all necessary in the areas of Language Typology and Sign Language Typology. Further expertise is also required in the areas of Variation in First Language Acquisition, Variation in Language Loss, and Variation in Space. The choice of the most urgent research capacities in the latter group has to be postponed pending the selection of candidates for regular vacancies (Assistant Professor of Dutch Linguistics, Full Professor of Romance Linguistics). The newly appointed researchers will not only bring in their specialized knowledge of the subdisciplines involved, but will also be given the task of project manager, i.e. the person in charge of organizing a research team under the supervision of a project coordinator.

14. Management

Programme Director:

Prof. Dr P.C. Hengeveld

Programme Board

Prof. Dr A.E. Baker (Scientific Director ACLC)
Dr P.P.G. Boersma (Project Coordinator)
Prof. Dr P.C. Hengeveld (Programme Director)
Dr J.J.M. Schoonen (Project Coordinator)
Prof. Dr F. Weerman (Project Coordinator)

15. Budget

For the financial backup of the programme funds will be requested from three sources: The Amssterdam Center for Language and Communication (ACLC) of the Faculty of Humanities of the University of Amsterdam, the Research Fund (COF) of the University of Amsterdam, and the Netherlands Organization for Scientific Research (NWO). The (non-indexed) division of labour for a five-year period starting January 2003 is projected as follows:

Debet

Curent ACLC researchers:		
3.2 fte research time (1.2 HL/0.4 UHD/1.6 UD)	€ 1300000	COF
New staff:		
4 Assistant Professors (GPL €66.000 per year)	€ 1325000	COF
2 Postdocs (GPL €50.000 per year)	€ 300000	NWO
4 Research Assistants (GPL €27000 per year)	€ 432000	NWO
5 Research Assistants (GPL €27000 per year)	€ 540000	ACLC
0.4 management assistant to programme director	€ 75000	ACLC
Other expenses		
Computers	€ 75000	ACLC
Travel	€ 75000	ACLC
Visiting scholars, expert meetings	€ 125000	COF
Visiting scholars, expert meetings	€ 125000	NWO
Total	€ 4372000	

Credit

ACLC	€ 765000
COF:	€ 2750000
NWO	€ 857000
Total	€ 4372000