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Documentation of endangered languages

A priority task for linguistics

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ABSTRACT¹

In the past decades, demonstrable progress has been made in the grammatical description of the many languages of the world. However, these achievements are far from sufficient:

1. Most descriptions are essentially incomplete in that they are restricted to one area of the language (mostly the grammar) and do not even fully document the area they are devoted to.
2. Most descriptions follow a more or less idiosyncratic model which either does not do justice to the language or is not intelligible for other linguists.
3. The number of undocumented languages still exceeds the number of languages which are at least partly documented.

Although efforts to improve the situation have recently been increasing on an international scale, languages die out faster than linguists describe them. Many conditions must be met before the situation can be remedied. One is a raised awareness of the size and urgency of the problem. Many linguists still do not see that describing endangered languages is the only really urgent task of linguistics, while all the other professional occupations, valuable as they may be, can still be executed after most human languages have died out. As long as the members of the profession do not appreciate this point, we cannot expect laymen to do so.

Another condition that must be met is a better formation of researchers in the art of linguistic fieldwork. In many countries and institutions, there is simply no tradition in that area. More and better fieldwork courses must be offered to young linguists.

This, in turn, presupposes a decisive improvement in descriptive linguistic methodology. A model for the full documentation and description of a language is proposed that has the following advantages:

- It is comprehensive in providing a three-level approach:
 1. Documentation: text corpus
 2. Description
 - 2.1. Situation of the language
 - 2.2. Language system
 3. Comments on the description
- It takes into account universal preconditions for linguistic structure and is, at the same time, flexible enough to be adaptable to any specific language structure.
- It does this by giving equal weight to linguistic form and function and by granting them their mutual independence.
- It is usable by freshmen in fieldwork, because it offers extensive methodological help.
- It facilitates linguistic analysis since it is available on the computer.

It is hoped that such a system will enable more linguists to describe more languages with better quality in shorter time.

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1. The endangerment of languages

1.1. The development of linguistic diversity

Linguistic diversity in the world is governed by counteracting forces. Separation of speech communities leads to split of languages. Intense contact or even merger and various kinds of oppression of speech communities lead to loss of languages. If one assumes monogenesis of human language, then the number of languages must have increased in prehistoric times over the millennia. This means that diversifying forces predominated over reductive forces for a long time.

The number of languages in the world probably reached its climax in the fifteenth century AD, i.e. before European colonization of Africa, America and Australia set in. Since then, the forces that extinguish languages have carried the day. Hundreds of languages have died out, and the process has been accelerating dramatically in the second half of our century, i.e. essentially during our lifetime. At present, there are over 6,000 languages still spoken in the world. It has been estimated (Hale et al. 1992) that only 10% of them will survive the next century. Currently, an estimated dozen dies out every year.

The issue of whether this is a desirable or a regrettable process for humanity will briefly be taken up in §3.3. Here I will just say that I think it is pernicious because it is necessarily bound up with a reduction of cultural diversity and a loss of sources of intellectual inspiration. This entails that forces striving for language maintainment merit our support in principle. However, every case has to be considered on its own, and no general rule is applicable.

Whether or not one thinks that linguistic diversity should be saved, it is beyond dispute that it is one of the genuine tasks of the science of linguistics to document and describe the languages of the world. Linguistics has to do this for various reasons. First, the task is included in the public mandate to linguistics. Although a society seldom formulates explicit mandates for sciences, it is clear that documentation and description of languages is one of the things that the general public expects linguists to do. In the case of endangered languages in particular, it is a service to the surviving members of a speech community who want to find out about their own roots. Second, documentation and description of languages provides the empirical basis for general linguistics. If we don't do this, linguistic theories of the future will be contingent on the properties of the languages which happen to be extant at that time to an even higher extent than this has been the case up to now.

1.2. Criteria of endangerment

If a linguist chooses a language as the object of his descriptive work, the decisive criterion in recent years has not seldom been the urgency to do this because the

language was threatened by extinction. This criterion is gaining in importance insofar as the rate of extinction exceeds the rate of completed descriptions.

Unfortunately, the endangerment of a language is not easily measured by objective criteria. The most important factor is probably the situation of the language in the social community. If the language competes with another one which ousts it from public usage and pushes it into the corner of intimacy, so that its range of use gets restricted, this is a first signal of alarm. Important clues to viability of a language include its use for school education, for written communication and in the media. A related aspect of the social situation of the language is the attitude that its speakers take towards it and competing languages. The situation becomes dramatic at the point where the language is no longer acquired by children. Then it is certain to die out with the death of its current speakers. Again, the sheer number of speakers, which is often used as an indicator of viability, is of secondary importance. Even a large speech community may shift its language within a few generations if they consider it to be socially inferior.

2. The documentary situation

There is no reliable estimate of the number of languages that have received linguistic description. An educated guess would seem to be that half of the world's languages are only known by their name. Of the other half, around a thousand may be represented by descriptions that comprise at least a grammar. Over the past decades, the sheer number of descriptions of small languages published per year has increased as well as their comprehensiveness and quality. Insofar, descriptive linguistics has no reason to complain of current trends. However, there is no reason to lean back either. Most available descriptions still fall short of the requirements of comprehensiveness, intelligibility and adequacy.

The requirement of **comprehensiveness** needs to be explained. Suppose an object of study is structured hierarchically in such a way that it breaks down into a small number of areas, each of which in turn breaks down into a small number of subareas, and so on, so that a finer degree of detail is reached at each lower level. In some cases, e.g. in the lexicon, the lowest level may consist of a large inventory of items which cannot, in principle, ever be enumerated, let alone described exhaustively. Comprehensiveness in the description of such an object cannot mean that each and every minute detail is represented. For one thing, this is humanly impossible; for another, it may be scientifically uninteresting. What comprehensiveness does mean is that each of the major areas at the highest hierarchical levels is considered.

Practically none of the available descriptions accounts for all of the major aspects of a language. Traditional and structuralist grammars are often confined to the phonology and morphology. On the other hand, modern grammars not seldom boil down to a syntax. Many grammars are not accompanied by a dictionary; but there are

also quite a few isolated dictionaries. More than half of the available descriptions do not give a single text of the language that would illustrate the grammar and give a vivid picture of the workings of the language. There is also an abyss between descriptions of the linguistic system and accounts of the historical and social situation of the language. Many grammars published in the era of structural linguistics don't give the impression that the language they describe was actually spoken by anybody. Even at the level of grammar, inveterate preconceptions about center and periphery have led to the result that certain subareas receive no treatment in the greater number of published grammars. These include proper names, word-formation, discourse particles, quantification and taxis (the syntax of verbal aspect). In §5, I will come back to a system of linguistic description that provides comprehensiveness.

The requirement of **intelligibility** simply means that anybody who knows the language in which the description is written and has a linguistic formation must be able to understand the description. A linguistic description may sin against this requirement in several ways. If it presupposes a certain model of grammar which it seeks to apply, it becomes unintelligible as soon as the model fades out of linguistics. Consequently, many tagmemic and transformational grammars of the sixties are not directly accessible today and require prior study of descriptive models then current in the history of linguistics. Another way of rendering a grammar unusable is to stick to the postulate of inducing the concepts of the description entirely from the peculiar structure of the particular language and then to give these categories idiosyncratic names. Writing an intelligible grammar requires some background in general comparative grammar.

The requirement of **adequacy** presupposes factual correctness. Over and above this, it comprises two tasks: First, the description must be general so that it and the language become comparable to others and that they can be explored by a typological approach. Second, the description must be specific so that the uniqueness of the language is brought out. We will see in §5.3 that these antagonistic tasks can be solved only if the description is based on two independent systems, one formal and one functional. However, it is clear again that many available descriptions are inadequate because they either vindicate generality at the cost of specificity, pressing the language into the Procrustean bed of some universal grammar, or they vindicate specificity, making the language look unlike anything else on earth.

The current state of affairs as regards documentation of the languages of the world may be summarized as follows: Of more than half of the languages, little more than the name is known. The others have been described with very uneven devotion. Of the existing descriptions, only a small percentage meet the requirements of comprehensiveness, intelligibility and adequacy. What is perhaps most important, however, is that those languages that have received the fullest attention in descriptive

linguistics are certain to survive the next century, while precisely those that are as yet undescribed are certain to be threatened by extinction.

Once the quality of extant documentation of a given language has been assessed, a further criterion that may be considered is the **uniqueness of the language**. While every language is unique, some are more so than others. In a sense that I assume can be made explicit, a genetic isolate is linguistically more valuable than a member of a large homogeneous family; and a typologically unusual language is linguistically more valuable than one that represents a well-understood linguistic type. However, it must be kept in mind that these are narrowly scientific criteria that have no import for the speakers of the language and their interest in its documentation.

3. Current linguistic activities

3.1. The urgency of the task

Grammars and dictionaries of languages outside European civilization have been written for several hundred years now. With the manpower available in all of linguistics, it would have been possible to fully document and describe all the languages of the world. This has not been done. The science of linguistics includes other tasks, and some of these have bound more energy than the description of new languages.

However, linguists must be aware that the object of their study has its own dynamics, which is largely outside their control. While there will be language as long as there will be linguists, linguistic diversity is diminishing fast. The nature of human language is variation; language manifests itself not directly, but only in the form of diverse languages. Linguistic diversity is thus an essential source of insight into the nature of human language.

Linguists can make a choice whether they want to take advantage of this source of insight or whether they want to let it die out unexplored. It is a matter of priorities. Linguistic theory, language typology, mathematical linguistics, psycholinguistics and so forth are all essential fields of linguistics which have to be cultivated. However, all of them can still be carried out at leisure after most of the languages of the world have died out; and some of them, notably linguistic theory and language typology, can be carried out the more fruitfully the more languages have been described. Describing endangered languages is the only really urgent task of linguistics. A shift in attention and devotion of manpower is called for. A simple extrapolation from the performance of linguists in the past centuries into the next century, which will see the disappearance of the greater share of the world's languages, allows us to predict that we have to double our powers if we want to record at last a representative portion of them. If this re-evaluation does not happen inside linguistics, we cannot expect the general public, including funding agencies, to appreciate the importance of the issue.

3.2. Projects on endangered languages

The beginning of this decade has seen a sudden rise in awareness in the linguistic community of the endangerment of languages and the necessity to do something about it (cf. Robins & Uhlenbeck (eds.) 1991, Lehmann 1993). The problem was on the agenda of the 1992 International Congress of Linguists. At about the same time, a couple of committees for endangered languages were founded at the national level. Also, the Comité International Permanent des Linguistes started an Endangered Languages Project with an international advisory committee and inspired the foundation of a Clearinghouse for Endangered Languages that is awaiting its definitive installment in Tokyo. The current director is Prof. Tsuchida; but he will be succeeded by Prof. Tsunoda during this year. This institute should co-ordinate the activities at the national and regional levels. The German Committee on Endangered Languages has held a summer school on linguistic fieldwork and language documentation and is currently planning a large documentation project (cf. Arbeitsgruppe für Bedrohte Sprachen 1993). Similar activities are going on in other countries.

3.3. Linguistics and public relations

The public image of linguistics is worse than it should be. While laymen generally take a vivid interest in diverse aspects of language (cf. Lehmann 1992), many of the pet preoccupations of professional linguists do little to meet these lay interests. The general reputation of our science is that of an abstract and idle specialists' hobby which has nothing to do with real life. As a consequence, linguists often just do not appear credible when they apply for large amounts of money for a task that they had never earlier talked about.

The problem is aggravated by the ambivalent attitude of the general public towards linguistic diversity. On the one hand, literate people generally admit that one of the few reasons that make it worthwhile to try and preserve the human species on earth is the fascinating variety of its intellectual, cultural and artistic products. As soon as they appreciate that linguistic diversity is an integral aspect of human diversity, they can be persuaded to lend support to the documentation and maybe even the preservation of small languages. On the other hand, many people, including some who think themselves intellectuals, suffer from linguistic diversity because it either limits their communicative possibilities or forces them to learn foreign languages. They see the happiness of mankind in the mass communication society in which everybody uses the same language. In this perspective, concern for linguistic diversity is backward and opposed to technical progress. There is some correlation between possession of power plus financial resources and strive for overall uniformity. Because of the former correlate, linguists have to try and convince these people; but because of the latter correlate, this tends to be very difficult.

4. Linguistic methodology

4.1. The current status of methodology in linguistics

Structural linguistics, especially its American variety, was much concerned with objective procedures that would allow one to work out the structure of an unknown language. While those linguists came up with a number of methods which are still valuable today, they unfortunately maneuvered themselves into a blind alley because they considered it important that the linguist should not be concerned with linguistic meaning and proceed in complete independence from it. The way out would have been to drop this inadequate prerequisite. This, however, was not done. Instead, our science was profoundly influenced by chapter 1, §4 of Chomsky 1965, entitled "Justification of grammars". This assumes that linguistics is interested in "the speaker-hearer's competence" (18) and claims

that no adequate formalizable techniques are known for obtaining reliable information concerning the facts of linguistic structure ... There are, in other words, very few reliable experimental or data-processing procedures for obtaining significant information concerning the linguistic intuition of the native speaker. ... Furthermore, there is no reason to expect that reliable operational criteria for the deeper and more important theoretical notions of linguistics ... will ever be forthcoming. (19)

Chomsky then goes on to argue that this is not detrimental because there are "masses of evidence" already available. The task is to construct a grammar for them. This, however, is a theoretical, not a methodological issue, the more so, as the native speaker whose intuition is at stake is often the linguist himself (20).

This construal of the methodological situation of linguistics has had an enormous impact on the field till today. It has led to an all but complete neglect of linguistic methodology. The result has been serious harm to the science and to the quality of available linguistic data. The problem of how we can, within the limits of available resources, obtain reliable, representative and interesting data from a little known language and then process, analyze and document these data so that they can be explored by future linguists or even by interested laymen is a very real one. Thanks to the impact of generative grammar, we are almost as ill prepared for solving it as we were thirty years ago.

4.2. Linguistic fieldwork

Linguistic methods should help in answering such questions as the following:

- What kinds of data should I record? What kind of data represents the culture, what kind of data represents linguistic structure? To the extent that the data are free texts, which genres should be represented?

- Who are the best linguistic informants for the various purposes, and how do I identify them?
- How do I record high-quality linguistic data that leave nothing to be desired?
- What techniques of elaboration, presentation and preservation do I apply to such data so that they can serve as a primary documentation of the language?
- What are the techniques of elicitation and counter-check, the test frames, experiments and analytical procedures to find out about linguistic structure in all the areas of the language system?
- Given factual limitations, which parts of the documentation and description have priority, and which can be worked out in the future on the basis of my documentation?
- What is the format of the comprehensive, intelligible and adequate description that I want to produce?

Apart from methods of structural linguistics of more than thirty years ago, the most valuable hints to solve such problems may be found in fieldwork manuals. Due to various accidents in the history of our discipline, only one of which has been mentioned, there has been little or no tradition in the art of linguistic fieldwork in many countries which otherwise have a strong linguistics. Japan, Germany and Italy are among them. One of our immediate tasks is to elaborate fieldwork courses and to offer them to young linguists who will go to the field and record an endangered language. This will require the revision of many a linguistic curriculum in countries such as those just mentioned.

There is the danger that linguistic methodology is considered a trivial issue not only by theorists, but also by people who actually want to do fieldwork. The issue is not trivial, for at least two reasons. First, linguistic methodology does not boil down to fieldwork techniques. As the set of questions enumerated above is meant to show, its function is to bridge the gap between practical linguistic groundwork and the scientific account of the language, including its system. Most available fieldwork manuals are insufficient because they don't bridge this gap, but confine themselves to the practical side. What we require is a comprehensive methodology that helps the analyst in integrating his findings into a coherent description.

Second, if we had unlimited time and manpower, we could neglect methodological issues because sooner or later the relevant facts would turn up despite the clumsiness of untrained linguists. However, the opposite of this condition is actually true. While the description of a language has taken various amounts of energy, from generations of linguists' work in the case of Latin and English down to the lifetime of one linguist in the case of many small languages in the last decades, we simply cannot afford to proceed along these lines in the next century. The languages are dying before our eyes. **Efficiency** becomes a real issue. We require a methodology that enables a linguist or a team of linguists and ethnologists to deliver a decent documentation and

description of a language within five years. To elaborate such a methodology is anything but trivial. It requires a joint effort of scientists who are experienced in the field and who must put their experience at the disposal of young people who are willing to go to the field. And, needless to mention, such a methodology must make use of the computer for efficient manipulation and consistent treatment of large quantities of data.

5. The Language Description System

5.1. Documentation and description of a language

The notion of documenting a language is unwonted in linguistics. Linguists have tended to think there was an overwhelming wealth of data and consequently no need to worry about the linguistic datum as such. While other sciences, such as archaeology or zoology, possess highly developed techniques to secure, prepare, archive and exhibit objects of their science, no corresponding culture has ever developed in linguistics. The closest thing that comes to mind are phonographic archives of dialects of European languages and, on a much smaller scale, of small languages in the third world. Now we suddenly get aware that the guarantee for eternal availability of any desirable amount of data only comprises the sheer quantity of data, but is an illusion if diversity and representativeness of data is at stake. We need to develop a culture of the linguistic datum and its processing.

Documentation of a language is an activity (and, derivatively, its result) that gathers, processes and exhibits a sample of data of the language that is representative of its linguistic structure and gives a fair impression of how and for what purposes the language is used. Its purpose is to represent the language for those who do not have access to the language itself. **Description of a language** is an activity (and, derivatively, its result) that formulates, in the most general way possible, the patterns underlying the linguistic data. Its purpose is to make the user of the description understand the way the language works.

In theory, documentation and description of a language are mutually independent. One should, in fact, document a language in such a way that future linguists can derive a description from it (cf. Himmelmann 1993); and one should describe a language in such a way that future linguists can produce data on the basis of it. In practice, however, these demands on the quality of documentations and descriptions exceed the capacity of human linguists. Moreover, the dividing line between documentation and description is not sharp. The documentation does not reduce to a body of raw data as produced by the speakers; it does not take a linguist to record that. The documentation includes representations of the data, representations produced by the linguist, e.g. a phonetic transcription, an interlinear morpheme gloss, a translation. If this is so, then the documentation contains an analysis. It presupposes a description,

and vice versa. For these reasons, it is neither possible nor advisable to separate the documentation from the description.

A comprehensive account of a language has the structure shown in T1.

T1. *Structure of a language description*

- 1. Documentation**
 - 1.1. Monological texts
 - 1.2. Polylogical texts
- 2. Description**
 - 2.1. Situation of the language
 - 2.1.0. Names of the language
 - 2.1.1. Ethnographic situation
 - 2.1.2. Social situation
 - 2.1.3. Genetic situation
 - 2.1.4. Historical situation
 - 2.2. System of the language
 - 2.2.1. Semantic system
 - 2.2.1.1. Lexicon
 - 2.2.1.2. Grammar
 - 2.2.2. Expression systems
 - 2.2.2.1. Primary: phonology
 - 2.2.2.2. Secondary: writing
- 3. Comments on the description**
 - 3.1. History of research
 - 3.2. Place of present description

Not all of these parts have equal weight. However, it is good to be aware that a grammar, far from exhausting the description of a language, is a fourth-level subpart of it.

5.2. Models of linguistic description

There is no scarcity of linguistic models on the market. Several of them meet certain standards of theoretical adequacy or interest. However, how do the descriptions engendered by them measure up against the standards of comprehensiveness, intelligibility and adequacy that were put forward in §2? I do not intend here to criticize any particular linguistic model. It suffices to observe that actually none of the available models provides for comprehensiveness as characterized in §2 and as defined extensionally in T1. This is not surprising, since practically all of them are intended to be models of grammar. Furthermore, most of the models fail on the count

of intelligibility, simply because they are intended to be formal models such that the grammars generated by them do not need nor strive to appeal to human understanding. However, what is most disquieting is their failure in terms of adequacy. None of the available models allows for a linguistic description that is both general and specific in the sense explained in §2. The reason is that most of them assume the universality of certain grammatical categories and relations. That is, they try to satisfy the requirement of generality by sacrificing specificity. The remaining models - essentially those of American structuralism - do not assume any universal categories and relations and thus sacrifice generality to specificity.

Does this mean there can be no model of linguistic description? In a sense, it means precisely this. The sense relevant here is that of universal grammar. Since grammar is by nature language-specific, there is no model of grammar which could account for the grammars of the languages of the world. Attempts to provide such a model are theoretically misguided. What one should strive for is a system with the following properties: First, it provides those concepts that are universal in human language, i.e. which, speaking methodologically, are presupposed by linguistics. Second, it provides a set of concepts and procedures at the level of methodology which allow one to characterize any language.

5.3. Form and function

We have seen in §2 that an adequate linguistic description must meet the contradictory requirements of generality and specificity. In addition, the description should treat together what is similar in the language. This demand may be understood to require maximum generality of descriptive statements and then is situated at the level of adequacy. Or it may be understood to require practical and economic usability of the description and then is situated at the level of intelligibility. How can these requirements be met?

The solution to the puzzle is: The section of the descriptive model which is concerned with the semantic system of the language must not presuppose particular associations of cognitive and communicative functions with structural means. Such associations are a matter of each particular language and therefore not universal. Consequently, there is a universal system of concepts at the level of cognition and communication; and equally, there is a universal system of concepts at the level of purely formal structure. However, concepts such as the grammatical categories and relations embody specific associations of cognitive and communicative functions with formal expressive means. They are not universal. Instead, they form an inventory of analytical concepts which by virtue of their prototypical definition allow for carefully controlled cross-linguistic application.

Such a model can meet the contradictory requirements of generality and specificity. It is general by virtue of its universal bases, which allow the user systematic

language-independent access to the data. It is specific because it treats all and only such associations of meaning with expression as are accomplished in the particular language. And it treats together what is similar in the language because everything that is similar is so either in cognitive/communicative or in formal terms; and the model allows independent access to the data by both of these avenues.

Existing frameworks for the description of arbitrary languages in a common format often take the form of a questionnaire which needs to be followed step by step. They tend to be perceived as a straightjacket by their users. What users want is a flexible format that is adaptable to the particular structure of their language. A framework which keeps form and function separate and allows the analyst to define his own associations between them meets this requirement of flexibility (cf. Lehmann 1989).

5.4. The Language Description System

An international tandem project executed, with some phase-displacement, by Bernard Comrie and Bill Croft, on the one hand, and by Christian Lehmann and Dietmar Zaefferer, on the other, elaborates a framework that meets the requirements put forward (cf. Comrie et al. 1995). The current Bielefeld version bears the name Language Description System (LDS). Its structure is shown in T2.

T2. *The Language Description System*

<i>Reference section</i>	<i>Specific section</i>
1. Glossary	1. Documentation
2. Universal frameworks	2. Description
2.1. Communication and cognition	2.1. Situation of the language
2.2. Formal structure	2.2. System of the language
3. Bibliographical references	3. Comments on the description
4. Technical help	

The reference section of LDS is a set of components with background information on various aspects of linguistic work. It corresponds to an "assistant" in modern commercial software. The specific part is but an empty skeleton with exactly the same structure as we saw in T1. The user will rely upon the reference section, making free use of the methodological tools and suggestions that it offers; but he will not need to modify it. What he is expected to do is fill in the specific part with data and descriptive statements concerning his particular object language.

In order to facilitate this task, LDS is implemented on the computer. It has extensive indexing and cross-referencing among all the parts of the description which need to be related. It provides useful search functions and tools to generate standard elements of linguistic descriptions such as lexical entries, morphological paradigms or multi-level

representations of examples. LDS suggestions as to how to structure each part of the description may be followed by the unexperienced freshman, but may as well be ignored or replaced by better insight of the advanced user. The resulting description can be stored in a database that allows for uniform access and comparative analysis of the languages archived; and it can be printed for publication.

6. Conclusion

The current situation in linguistics is characterized by an urgent need of tools for efficient documentation of languages. The Language Description System will enable more linguists to describe more languages with better quality in shorter time.

7. References

- Arbeitsgruppe Bedrohte Sprachen der Deutschen Gesellschaft für Sprachwissenschaft 1993, Informationsbroschüre zur Dokumentation von bedrohten Sprachen. [Köln]: Deutsche Gesellschaft für Sprachwissenschaft.
- Chomsky, Noam 1965, *Aspects of the theory of syntax*. Cambridge, Mass.: MIT Press (Special Technical Report No. 11).
- Comrie, Bernard & Croft, William & Lehmann, Christian & Zaefferer, Dietmar 1995, "A framework for descriptive grammars". Crochietiere, Bernard et al. (eds.), *Proceedings of the XVth International Congress of Linguists*, vol. 1. Quebec City.
- Hale, Kenneth et al. 1992, "Endangered languages." *Language* 68:1-42.
- Himmelman, Nikolaus P. 1993, "Material ambitions." *Languages of the World* 7/2:66-68.
- Lehmann, Christian 1989, "Language description and general comparative grammar". Graustein, Gottfried & Leitner, Gerhard (eds.), *Reference grammars and modern linguistic theory*. Tübingen: M. Niemeyer (Linguistische Arbeiten, 226); 133-162.
- Lehmann, Christian 1992, "Das Sprachmuseum." *Linguistische Berichte* 142:477-494.
- Lehmann, Christian 1993, "Sprachen sterben aus." *Forschung an der Universität Bielefeld* 8:3-9.
- Robins, Robert H. & Uhlenbeck, Eugenius M. (eds.) 1991, *Endangered languages*. Oxford & New York: Berg (Diogenes Library).