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Points of Reference in First-Language Loss Research

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1. INTRODUCTION

Language loss can be defined as a form of individual language evolution by which an individual loses (part of) his competence or proficiency in a particular language (Andersen 1982:84). A definition focusing on loss in the individual can cope excellently with instances in which people lose part of their proficiency in a second or foreign language (L2 loss). It is also in this specific research area that the terminology and methodology of the study of language loss have been developed and applied. The overview of studies that is incorporated in Lambert & Freed's (1982) influential book illustrates this L2 pre-occupation of language loss research very well. Nevertheless, it has been pointed out several times that the concept of language loss should also incorporate the process of primary language loss (L1 loss), i.e. the loss of one's first language or the first language of those responsible for one's socialization (Freed 1982, Lambert 1982). However, in studies on primary language loss it is often not the individual that is the basic unit of analysis. In studies on dialect loss (e.g. Münstermann & Hagen, this volume) or language death (e.g. Dorian 1980, 1982) as well as in studies on L1 proficiency of ethnic groups living in immigrant countries, the evolution of proficiency in specific groups forms the main focus of analysis. The main cause of the process of loss is not to be located in the individual forgetting or losing some elements or rules of a language, but in an incomplete transfer of a language from one generation to the next.

This point nicely illustrates that the terminology and methodology of L2 loss cannot be transplanted into research on L1 loss without at least some precautions. The study of L1 loss is marked by specific methodological problems, which are hardly dealt with explicitly in the literature on language loss. We encountered some of these problems when setting up a research project on primary language loss of Turks and Italians living in the Netherlands and Flanders, the Dutch-speaking part of Belgium. In this paper we will not discuss problems related to the operationalisation and analysis of explanatory or predictor variables in the research design; some of these have been discussed elsewhere (Jaspaert & Kroon 1986). The discussion here will be restricted to the operationalisation and measurement of the extent and nature of the process of primary language loss.

In section 2 some basic differences between research designs in L2 and L1

loss will be described. A typical research design in L1 loss appears to be the so-called *one-shot design*, in which the time factor in the form of longitudinal measurements is absent. A central problem then becomes which kind of data can serve as the point of comparison or the *point of reference* for defining and establishing the nature and extent of language loss. The definition and operationalisation of the point of reference for measuring language loss should play a more important role in the planning of the research and the analysis and interpretation of the data in language loss research than they have done so far. Also in section 2, some problematic aspects of longitudinal designs will be elaborated, aspects that are hardly touched upon in the literature on language loss. In section 3 it will be shown that also simple longitudinal designs may be accompanied by problems with the definition of a point of reference. In section 4 we will focus upon the use of control groups for establishing the point of reference. Section 5 deals with the possibilities of creating a point of reference, with the aim of establishing the amount of L1 loss, on the basis of different kinds of data sources. In section 6, the concluding section, it is suggested that a combination of different research designs and various points of reference is a useful way to proceed in primary language loss research.

2. DIFFERENCES IN RESEARCH DESIGNS BETWEEN L2 AND L1 LOSS

In the concept of language loss a crucial role is played by the factor time. Loss may simply be described as a negative change in the level of language skills over time (Lambert 1982:6). If a language feature is known at moment X_i , but not anymore at moment X_{i+1} , that feature is said to be lost in the period (X_i, X_{i+1}) . Taking the individual speaker as the central unit of analysis, the most natural research design incorporates the time dimension by carrying out longitudinal measurements. The process of language loss is traced by following a group of individuals who forget part of a language during a period of non-use of that language or minimal contact with that language. The simplest design has two points of measurement to observe the change over time, i.e. a so-called *pretest-posttest design*. The loss can then be detected by comparing the language level or proficiency of individuals at two different moments in time. Examples of this approach can be found in the contributions by Olshtain and Weltens & Van Els in this volume.

Another approach to grasping the time factor in a research design is the comparison of different groups. This can, for instance, be done by comparing a group of persons that acquired or used a language under unfavourable circumstances with a group that acquired or used the same language under different, more favourable conditions. In that case the simplest design is that of comparing two groups (the so-called *static group comparison*), where the

language loss process is detected by comparing the language level or proficiency of those two groups. This means that these group differences are supposed to reflect the differences in language proficiency between the research group *now* and that same group *earlier*, or between the proficiency of the group *now* and the proficiency *it would have had* if the unfavourable circumstances had not occurred. In this way the static group comparison deals with the time factor without being longitudinal in the strict sense of the word. When, for instance, one wants to find out whether second generation members of an ethnic minority group living in Western Europe have a lower proficiency in the minority language, one would want to compare their proficiency with that of a group who acquired that language in more natural conditions. The latter group functions as the control group. However, it is not always self-evident when one uses the research strategy of group comparison, what kind of group should be the control group, or - to use our own terminology - which group could give the researcher the optimum point of reference.

There are at least two reasons why a longitudinal design is not feasible in research on L1 loss. The first one concerns the length of the time intervals between measurements; the second has to do with differences between language loss and language change.

In L2 loss a period of a couple of months of non-use may suffice to detect a substantial change in language competence (cf. Olshtain, this volume). Obviously, the loss of a primary language - a language one used to know so well for such a long time - seems to be a rather slow process in most cases. Only when some minor changes are the essential variables in a research plan, does it make sense to work with relatively short time intervals. In order to answer more thorough questions on language loss (e.g. which informant characteristics play an important role in the loss process, how fast and in what way does the loss spread in the group, how can loss data be used to predict the future language situation, how do language loss and language shift relate to each other), time intervals of at least several years seem to be needed. The necessity of long time intervals becomes even more acute when it is taken into account that the act of measuring language proficiency in L1 may have a strong impact on the loss process. The confrontation with a certain amount of language loss may be *all the stimulus an informant needs to remember aspects of the tested variables* (or to go out and find out about these variables) in an analogous test situation some months later. Then the design itself has disturbed the natural course of the language loss process it hoped to track down.

A second argument against a longitudinal design in research on L1 loss is that not only processes of language loss may occur in a given time period. (Natural) language change or language evolution may be the only cause for a linguistic element occurring at moment X_i to have disappeared at moment X_{i+1} . The element may have been replaced by another element. Especially in the case

of very long time intervals, the potential occurrence of pure change processes has to be taken into account. It is necessary to carefully separate loss processes from change processes, because otherwise the concept of language loss will lose its specificity in comparison with other forms of language evolution and, at the same time, its usefulness as a concept in empirical linguistics. Unfortunately, the empirical observation that a linguistic element has disappeared does not give us a direct clue to the latent process that underlies its disappearance. L1 losers do not just lose linguistic elements over time. They, too, may lose lexical items which refer to things in reality that have disappeared because of cultural change, or they may substitute linguistic elements. The fact that such a substitute is borrowed from another language system may be too unimportant a feature of language loss to warrant the claim that language loss is a separate, autonomous language change process. After all, it does not make sense to look upon all non-English Western Europeans as language losers because of the fact that they borrow elements from the English language.

The conclusion has to be that only in a very limited way longitudinal designs are useful in primary language loss research. However, in other designs the problem of defining the point of reference in order to trace language loss deserves special care as well. One solution is to introduce into the design a control group (see section 4), but this strategy is not always practicable. One has to draw, then, on other resources that give information on the (supposed) previous language proficiency of the subjects or on the language proficiency of preceding generations (see section 5).

3. THE POINT OF REFERENCE IN PRETEST-POSTTEST DESIGNS

Part of the merits of a simple pretest-posttest design to incorporate the time factor in language loss research is based upon the assumption that there is a linear relationship between time and the loss of language, and particularly the speed of language loss. The linearity assumption implies that the amount of language loss in a specific time period, which is equal to one's language proficiency at moment X_i minus the proficiency measured at some later moment X_{i+n} , is independent of the degree of language loss at moment X_i . However, if the relation is not linear, the degree of language loss at moment X_i is directly related to the speed of language loss that is to be expected during a time period (X_i, X_{i+n}) . The difference between a linear and a non-linear relationship between time and language loss is depicted in figure 1.

The logistic relationship in figure 1 clearly shows an interdependency of the speed of language loss in a given time period and the degree of language loss at the beginning of that period. Because of the occurrence of non-linear patterns, it is necessary, if one is to draw conclusions on the speed of language

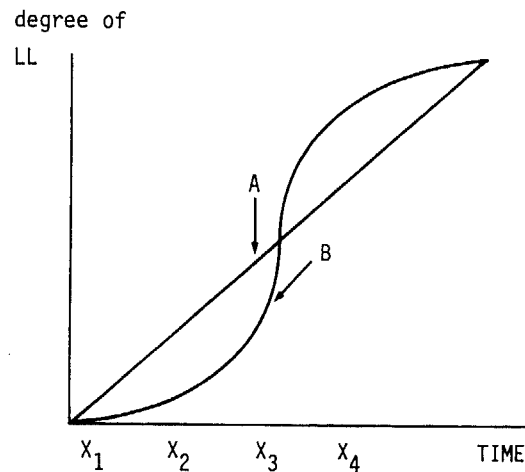


Fig. 1: Hypothetical relationship between time and degree of language loss (A: linear relationship; B: logistic relationship; X_1, X_2, X_3, X_4 : measuring moments; $f(A): X_1 - X_2 = X_3 - X_4$; $f(B): X_1 - X_2 < X_3 - X_4$).

loss, to control for the degree of language loss at moment X_i . This means that the problem of establishing a point of reference for moment X_{i+n} has been solved only partly, in the sense that it is moved to moment X_i ; the next step in the analysis requires the establishment of a point of reference for moment X_i . It is important to note that it is highly improbable that the relation between language loss and time is linear. Many growth processes and processes of cultural change have an S-like curve (Cavalli-Sforza & Feldman 1981). Processes of decline probably have the same form.

4. INTRODUCING A CONTROL GROUP AS A POINT OF REFERENCE

By comparing different groups it is possible to trace the differences in language proficiency between the groups involved. The best comparison is one in which an experimental group, the group that has undergone a specific 'treatment', can be compared with a control group, the group that is similar to the experimental group except for the treatment factor. In the case of language loss research, the basic assumption will be that the experimental group would have had the same level of language proficiency if they had not experienced the 'treatment'. Since research designs in L1 loss are quasi-experimental, 'treatment' here is not to be interpreted as an active intervention or manipulation on the part of the researcher. It just means that there is some specific factor or, possibly, group of factors which embodies the difference between the two

groups of informants involved. Through careful selection the researcher tries to create a situation in which the experimental group and the control group are matched except for the factor that is directly related to the process of language loss.

In some cases it is self-evident which factor is to be selected as the treatment factor. When one is interested in language loss caused by a prolonged absence from the original speech community, the experimental group will contain a selection of longtime emigrants, whereas the control group will contain a selection of speakers still living in the original speech community or a selection of speakers who have very recently emigrated.

Nevertheless, when the factor of absence becomes confounded with other developments, such a research design may cause interpretational problems. An example of such a confusion can be found in Tosi's research on Italians living in Bedford. Tosi (1984:72-119) interprets the differences between the Italian of this group and the Italian of people still living in Italy as a result of diverging forms of language evolution due to different socio-economic circumstances and developments in the two groups. At the time when most migrant workers left Italy, the villages they came from were quite isolated from Italy's industrialized life. The nearly exclusive medium of communication was the local dialect. In the period after the emigrants left, these villages became more and more involved in mainstream Italian life and their isolation was gradually reduced. These developments brought about contact with - and later on also knowledge of - the Italian standard language. For the migrant workers the contact with industrialized city life took place through the use of a *foreign* standard language. The parallelism of the two evolutionary processes shows that what happened is not the loss of something that was acquired earlier, but the product of the need to cope with a new emerging reality.

When selecting a control group as a point of reference, one has to be aware of the fact that the difference in behaviour between the experimental group and the control group is in most cases not solely interpretable in terms of forgetting. The research results of Verhoeven & Boeschoten (1986) provide a nice illustration of differences of this type that call for alternative explanations. They used a control group to study the language loss of Turkish children living in the Netherlands. By comparing the proficiency of these children with a control sample of Turkish children in Turkey, they found that the Dutch-Turkish children slow down in the acquisition of Turkish at about the age of 6. Probably, the Dutch-Turkish children have never known more Turkish than they showed at the moment of investigation. Their stay in the Netherlands has not caused them to forget, but to learn incompletely.

5. USING DATA FROM OTHER SOURCES AS A POINT OF REFERENCE

When a pretest-posttest design cannot be used, and when a control group cannot be selected, one is forced to use a design in which the results of the measurement are compared with linguistic data from other sources. A good example of such a design is the research by Münstermann & Hagen (this volume). The linguistic data that serve as a point of reference for their measurements are drawn from dialect surveys in the Maastricht area around the turn of the century. A point of reference constructed in such a way can be looked upon as the level of language proficiency a language user is supposed to have had at some earlier moment in time, or as the proficiency level of some hypothetical control group.

The most popular point of reference of this type is probably the so-called fully competent speaker (to whom we shall refer with Andersen's (1982) abbreviation LC, a "linguistically-competent" individual). The popularity of the LC as a point of reference, however, is largely due to the fact that many researchers overlook the design problems connected with L1 loss research. One-shot measurements are often interpreted as an indicator of a language loss process without any explicit indication of what data fulfil the role of point of reference. A recent example of the implicit use of full competence as a point of reference can be found in the first nationwide census data on language proficiency of ethnic groups in the Netherlands. The report of the Dutch Central Bureau of Statistics shows that 35% of the Moroccans and only 4% of the Turks in the Netherlands state that they have problems with writing a letter in their mother tongue (CBS 1985:29). This result is only remarkable if one assumes a situation in which every adult member of a group is able to write a letter in his mother tongue. When it is taken into account that the rate of illiteracy is much higher among Moroccans than among Turks, the result becomes much less remarkable.

Even when the LC is explicitly given the function of point of reference, a number of problems remain. Most of these problems can be reduced to the fact that the LC, just like his home base, the homogeneous speech community, is a hypothetical entity that does not reflect everyday linguistic reality. Full competence simply cannot be defined in an absolute sense, without taking into account the sociological, geographical and historical position each language user is in. This is exemplified most clearly in the domain of the lexicon. It is common knowledge that most language users get by with only a fraction of the total lexicon of a language. This fractionality interferes with the decision whether a lexical gap that is empirically registered should be regarded as sociolinguistic variation or as an instance of language loss.

With grammatical linguistic elements the problems with the determination of full competence seem to be much smaller. Especially morphological categories

seem to provide promising material for language loss research. A fully competent speaker may be expected to know how to form the past tense of any verb he knows or to know to which words a derivational process is applicable. Any deviant response or form of behaviour can then be interpreted as the outcome of language loss. Incidentally, such an interpretation again implies that language loss does not only include forgetting, but also incomplete learning. Incomplete transfer of language proficiency from one generation to the next is an example of a situation which could lead to an imperfect acquisition of closed grammatical categories. So, using full competence as a point of reference in language loss research means that the scope of the concept language loss is widened to include instances of incomplete learning, without the possibility of distinguishing one from the other.

It is doubtful, however, whether full competence in morphological categories can always be determined irrespective of the language user. Language change, which clearly affects these categories as well (cf. copula-deletion in Black English, Labov 1972; and "que"-deletion in Canadian French, Sankoff 1974), sometimes makes it impossible to decide which linguistic elements must be considered the expression of full competence. A possibly confusing change in progress in Dutch is the increasing use of *wat* as a relative pronoun referring to a neuter antecedent instead of *dat*. The use of the oblique pronoun *hun* as a subject pronoun is another example (Remarkably enough, these phenomena translate directly into English: the use of *what* for *that/which*, and the use of *them* for *they*, which is also common in (non-standard) English). Unless one is willing to regard these forms of language evolution as instances of language loss, language loss research into these language elements is seriously impeded.

In a preliminary investigation for the project mentioned in section 1 above, we investigated aspects of language loss with Turkish immigrants in the Netherlands. We tried to find out whether the causal verb system in Turkish is affected by language loss (Jaspaert & Kroon 1986). Turkish basically has two productive and four non-productive or irregular processes to form causatives from existing verbs. A multiple-choice test consisting of six items was constructed and presented to 30 Turkish immigrants. The causative in each sentence was formed with each of the six morphological processes. Each time the informant had to choose the correct causative form. We wanted to test Andersen's hypothesis that productive, regular constructions will be overgeneralized so as to replace a non-productive, irregular form (Andersen 1982:203). We found that the answers of all informants (recoded to a correct/incorrect dichotomy) constituted an implicational scale (reproducibility 0.91, scalability 0.70). Three informants got all six forms correct. This result seems to imply that a fully competent speaker can be expected to be able to score 100% on the test and that deviances from this perfect score are due to loss. This conclusion becomes a lot less plausible, however, when the informant characteristics are

taken into account. Especially the length of stay in the Netherlands is a very telling variable in this respect. None of the four informants who arrived less than a year before the testing moment had a score of 100% (three had 5 out of 6 correct, the fourth 4 out of 6). The correlation between the scores on the implicational scale (the Ford-scores) and length of stay only amounts to -0.29. No other factors seem to have any influence on the position of the informants on the implicational continuum. So, what at first sight looked like good evidence for the usefulness of the full competence as a point of reference for closed categories turns out to be a continuum, the interpretation of which in terms of language loss is at least debatable. The probability has to be faced that the implicational scale represents the knowledge acquired, rather than the amount of knowledge forgotten.

At this point, we also want to question the use of grammars and dictionaries in determining a competence level as a point of reference. In most cases grammars and dictionaries reflect a highly idealized form of the language use of a fully competent speaker. Using them for the determination of the point of reference very often results in including forms of language use that can hardly be considered common knowledge to all LC's. To what absurdities this might lead can be exemplified by the Flemish language situation. Officially the standard language used in Flanders is Dutch, as it is spoken in the provinces of Holland, the central area of the Netherlands. Recent sociolinguistic research has made it clear that in the actual Flemish situation, the standard language used is a variety of Dutch which differs in a number of ways from the Dutch spoken in Holland (Deprez 1981, Jaspaert 1984). Since codification institutions generally adopt the official point of view, these differences are hardly recognized or described in grammars and dictionaries representing the Dutch language. If one were now to use this canonical language description in order to establish full competence in Dutch for Flemings, one would arrive at the absurd conclusion that all Flemings have suffered language loss.

Additionally, the above-mentioned drawback of using codified descriptive linguistic material is compounded by the fact that this material is very often outdated. In order to avoid this problem, it seems desirable to base the notion of full competence on the language proficiency of language users of flesh and blood that can reasonably be expected to be fully competent.

The fully competent LC is not the only possible point of reference that can be inferred from other data sources. One could, for instance, use the language proficiency level of a 12-year-old as a point of reference, provided that one has sufficient information to determine that level. Or one could take the ability to accomplish a given task (such as reading a text, following written instructions, writing a letter) as a point of reference. The merits and demerits of these points of reference do not differ basically from those of the LC. They, too, are easy to apply but suffer from the impact language variability may have on

them.

Yet another point of reference of this type can be obtained by the method of retrospective questioning in which each informant is asked whether his language proficiency has ever been greater than at the moment of investigation. The types of research topics that can be set off against this kind of point of reference are very limited. One cannot expect Turkish informants to be aware of their knowledge of language at some time in the past regarding, for instance, the morphological process of forming causatives in Turkish. At best, one can try to find out in this way whether the informants believe that they would have performed better on a test on causatives in the past. This fundamental restriction on this type of point of reference makes it inadequate for research on structural aspects of loss. A great advantage of retrospective questioning, however, is that it relates very closely to the strict interpretation of the concept of language loss as the loss of language elements one used to know but does not know anymore. Unlike all measures of loss derived by comparing data with points of reference discussed in this section, measures based on retrospective questioning are not blurred by other forms of linguistic variation. On the other hand, this point of reference is based on self-report data, and this includes all (often systematic) distortions of information that occur when people are asked to report on their own behaviour (for a discussion of the use of self-report data in language loss research, see Clark 1982).

As was pointed out at the beginning of this section, linguistic data from sources other than the measurements included in the design can be used as a point of reference for research in which the individual or the group is the main point of interest. When the research is aimed at individual loss, using this type of point of reference often implies that it is assumed to be identical for all persons investigated. That this situation leaves much to be desired has already become clear. The problem that such a constant point of reference causes can partly be solved by introducing some differentiation in the point of reference chosen. If sufficient information is available, one can establish a separate point of reference for each subgroup of informants that appear in the experimental group. One can, for instance, draw on Italian dialect studies to bring about some differentiation when establishing a point of reference in research on language loss of Italians in the Netherlands. One can make the notion LC, serving as a point of reference in such research, partly dependent on the dialect region each informant comes from. Or one can use the dialectological information to control the factor language background, by only selecting informants originating from areas that do not differ dialectologically with respect to the linguistic features under investigation.

One can, of course, go very far in subdividing the experimental group into different point of reference groups. The problems that arise here are analogous to the problems with matching groups as discussed in section 4. Here too,

finding a compromise between working with one group and going into too much detail seems to be the best course of action.

As a last remark with respect to working with this type of point of reference, we want to point out that group-related and individual-related points of reference of this type should not be mixed in the interpretation. Group loss measured in this way need not be a simple aggregate of a number of individual losses. Veltman (1983) gives a clear example of this. He shows that the more or less stable language proficiency of the Hispanics in the United States probably is not caused by a high degree of retention of primary language skill by Spanish-speaking immigrants, but may very well be due to the continuously high influx of Hispanics into the United States. So, group comparisons point towards retention, whereas individual measurements would probably have signalled loss.

6. CONCLUSIONS

We hope to have made it clear that primary language loss research differs substantially from research into second language loss with respect to the design problems that occur. Unlike second language loss research, primary language loss research does not always have the individual as the unit of research. Instead, the main interest of the researcher may concern the group. Even when individual loss is investigated, the researcher may for practical reasons prefer not to use a pretest-posttest design, as is common in second language loss research. When a longitudinal design is either inadequate or too impractical, the researcher has to establish a point of reference, a measure of language proficiency with which he wants to compare the language proficiency in his experimental group. In choosing a point of reference, he determines to a large extent the scope of the phenomena researched. The researcher must be aware of the aspects of linguistic evolution incorporated in the measures he develops. He has to decide which sources of language change he is willing to accept as instances of language loss, and he has to take steps to set these apart from other, unwanted sources. He should take into account the limitations on the possible research topics that every point of reference entails.

Considering all the problems discussed above, choosing a research design for primary language loss research seems to be a matter of selecting the least undesirable of a number of alternatives. In this respect, it may just be the safest course of action to measure language loss in a number of different ways. Comparing measures of language loss obtained by means of different designs looks like a handy way to find out what the evolutionary nature of an instance of language change is, thus enabling researchers to set language loss (in its different interpretations) apart from other forms of language evolution. Such a

comparative approach may also lead to a better insight into the different aspects of language loss: by combining the LC as a point of reference with a longitudinal design, one may get an insight into the relationship between time and degree of language loss, thus making co-occurrent research on speed and structure of language loss possible. However, a review of the possibilities of and the problems involved in combining various designs would lead us far beyond the introductory overview intended.

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