Description of the Proposed Research

In the development of languages, change due to contact plays a paramount role. Over the last twenty years, the relationship between language contact and language change has been one of the central issues in historical linguistics.

The present project aims at answering one important question: what is the reach of possible variation in the results of language contact when both the contact situations and the structural features of the languages are very similar. Contact-induced change in Northern Berber through the influence of dialectal Arabic offers such a case: as both Northern Berber and dialectal Arabic constitute dialect continua, the great lines of language structure are similar inside both language groups. Moreover, Berber-Arabic language contact has followed similar lines for at least 800 years: large-scale bilingualism in the Berber community, as opposed to monolingual Arabspeaking communities; Arabic dominance in a number of realms of social interaction; absence of large-scale language shift of speakers of Arabic to Berber.

In the study of contact-induced change, two main lines of research dominate (Aikhenvald & Dixon 2006). In the first place, researchers have tried to describe and classify the outcomes of language contact, leading to such questions as: can everything be borrowed, are there hierarchies of borrowability. Recent examples of such enterprises are Heine & Kuteva (2005), who provide a grammaticalization account of contact-induced change, and the Manchester-based project on the typology of grammatical borrowing (e.g. Matras & Sakel 2007). The Leipzig-based Loanword Typology Project (Haspelmath & Tadmor 2008+) aims at similar targets in the field of lexical borrowing.

A second popular line of research looks at the sociolinguistic conditioning of types of contact-induced change. Starting from the obvious point that the social circumstances of language contact have implications for the degree of foreign impact, researchers in this subject converge to a model that seems now generally accepted (Thomason & Kaufman 1988, Van Coetsem 1988, 2000, Guy 1990, Winford 2003). While the details of the model differ from author to author, the central tenet is the same: there is a major difference between the linguistic outcomes of a situation in which two languages co-exist and speaker groups are in contact but largely co-exist (language change with language maintenance), and a situation in which a language is taken over by another group (language change through language shift). In the first situation, the majority of the speech community are first language speakers, and one expects the recipient language to be the moulding factor in the adaptation of the new element ("recipient language agentivity"). In the second situation the majority (or all) speakers of the relevant community are second language speakers. In such a case, the changes take place through the effect of the earlier language of the community, and the source language is the moulding factor of the newly developing language variety ("source language agentivity").

This model has been propagated and applied with considerable succes, and may be considered the standard model at the moment.

This is not to say that the model is unproblematic. Kossmann (2005:194ff) pointed to the difficulties of considering recipient and source language agentivity in a very simple and superficial case of lexical borrowing. If, in a market situation, a supplier of goods (e.g. camels) uses a different language from his own language, he may introduce terms related to his merchandise (e.g. camel colors) into the market language. This implies agentivity of the source language, which is the native and dominant language of the supplier of the term (and the good). However, once these terms are used outside the market context by the buyer (as a native speaker

of the market language), they undergo a moulding according to the native language of the buyer. In this phase, one has to reckon with recipient language agentivity. So once the term has become accepted by the native speech community of the market language, the word has undergone a double moulding, first in the sense of the source language and second in the sense of the recipient language. Deciding whether the adaptations in question are due to the recipient language or due to the donor language becomes very difficult if not impossible in many cases. This, in the end, implies that in many (if not most) cases of language transfer through bilingualism it is impossible to decide whether a certain feature has come into the language through the effect of source language agentivity, or as a result of adaptation to the recipient language by native speakers of that language.

The claim of predictability of the types of contact-induced change by sociolinguistic context has also been challenged. Thus, Pakendorf (2007) found that in the Siberian language Sakha (Yakuts), contact-induced change based on Evenki mainly belongs to the type commonly attributed to language shift. However, DNA analysis shows that the population who now speaks Sakha is not physically very much related to the Evenks (as one should expect when the Sakha were "Evenks" who shifted to another language), but clearly belongs to the same genetic type as speakers of languages related to Sakha. Thus, the sociohistorical predictions based on the linguistic material were clearly false in this case (Pakendorf 2007:324).

It seems wise, therefore, to take a step back and readdress the central tenets of the models on the basis of empirical evidence. Most conclusions on contact-induced change have been based on research comparing situations with differing variables, either on the side of (presumed) sociolinguistic setting, or on the side of the language structures involved, or both. Moreover, in most (not all) research projects of this type, either grammatical or lexical change have been studied.

One way to clarify the picture is the comparative study of the variation in outcomes of language contact, in which the basic determining variables (sociolinguistics and linguistic structure) are kept as constant as possible. Such an enterprise demands for:

- a. Relatively constant sociolinguistic embedding in a larger territory (in order to make comparison possible at all).
- b. Relatively constant linguistic embedding. This is attained by having source languages which are not too far from each other linguistically, and recipient languages which do not display too much variation either

The ideal embedding is therefore a dialect continuum stretching over a larger territory with the same language influencing the entire continuum. From the point of view of method, it is important that features which are (possibly) due to contact-induced change be distinguisheable from inherited features. In order to achieve this, one needs:

- c. Languages, whose linguistic history is sufficiently well-known.
- d. Languages in contact where enough structural features are different in order to make the disentangling of contact-induced change and inheritance possible.

The case presented here is ideally suited to the enterprise described above: the influence Northern Berber languages underwent through Arabic. Since the 8th century AD, native speakers of Berber

languages and of vernacular Arabic have been in close contact. Berber languages are now spoken by geographically separated populations all over Northern Africa; the other inhabitants have vernacular Arabic as their mother tongue. Language contact follows clear lines: Native speakers of Berber tend to be bilingual in Arabic, but native speakers of Arabic are rarely bilingual in Berber. Language shift involves Berber speakers shifting to Arabic and not the other way around. Thus, there is a relatively stable language contact situation for Berber languages all over Northern Africa, characterized by long-standing, stable asymmetrical bilingualism. Berber is mainly used for in-group communication, and — except in some larger Berber-speaking territories — the language used for communication outside the community is dialectal Arabic. There is no reason to assume that large-scale language shift from Arabic to Berber has ever occurred.

Berber constitutes a relatively close-knit language group. The languages concerned in this project are quite similar in structure; the more divergent Berber languages, Tuareg and Zenaga, fall outside the scope of the project. Something similar can be said of the Arabic varieties which are relevant to our purposes. Most important among these is dialectal Maghribinian Arabic, which has a large number of varieties, but whose general features are relatively constant.

The linguistic history of both sides of the language contact situation is relatively well-known. The uniqueness of certain Maghribine Arabic features (which could be due to Berber influence) can be checked by comparison with ancient and modern varieties of Arabic from outside the Maghrib. The study of the linguistic history of Berber has advanced a lot in the last decennium, and is sufficiently known for the present purposes. The existence of Berber varieties which have hardly been influenced by Arabic (Tuareg) provides us with a useful check for determining inheritance as opposed to contact-induced change.

Northern Berber and Arabic belong to different language families. Although they form both parts of the super-phylum Afro-Asiatic, common inheritance from this stage (which has about twice the time-depth of Indo-European!) is very rare. Where necessary, this will of course be pointed out in the project.

The subject of Arabic-based contact-induced change in Berber has never been studied in detail, even though the existence of large-scale Arabic influence on Northern Berber lexicon has sometimes been commented upon (René Basset 1906, Schuchardt 1908; André Basset 1952:43, Bynon 1970:71, Chaker 1984, Kahlouche 2001, etc.). With the exception of the short note by Chaker (1995:117-123), grammatical influence by Arabic has only been remarked on in passing.

The project has the following aims:

- a comparative study of contact-induced change under the influence of Arabic such as found in the Northern Berber languages. This study involves both grammatical structures and lexicon. It will provide us with a wide vista of the possibilities of contact-induced change in a situation with prolongated asymmetric bilingualism.
- an embedding of the results of the comparative study in the framework of the study of contact-induced change on a wider scale. This includes the check of preexisting implicational scales, as well as the formulation of new scales, the confrontation of the results with the general expectations regarding the results of contact-induced change through language maintenance, and, finally if necessary on the basis of these results a reassessment of the question of language maintenance vs. language shift as major factors determining the results of contact-induced change.

The result will be a comparative study of contact-induced change under relatively constant sociolinguistic factors, and relatively constant linguistic factors. The outcome will give a clear

insight into the variation and lack there-of in outcomes of contact-induced change under comparable circumstances. The project is unique in its scope, because of the latitude of phenomena studied (phonology, grammar, lexicon) and because of the clarity of its method (aiming at constancy in variables).

Project organization is as follows. The main investigation, which will lead to a synthetic monograph, is carried out by the PostDoc, who has a long experience in Berber historical and descriptive linguistics and in the study of contact-induced change in general. This investigation is supplemented by two punctuated PhD projects, which will add important information on subjects relevant to the main investigation. The first investigation focusses on the description of Ghomara Berber, and on the way Arabic elements are integrated (or not) into the language. The second investigation focusses on the comparison of semantic and complicated syntactic structures in two adjacent varieties of Berber and Maghribinian Arabic in Eastern Morocco. The two PhD projects supplement the data and analyses of the PostDoc project with an investigation of two important issues: the most extreme case of Arabic influence in Berber (Ghomara) and a subject rarely addressed in contact linguistics.

The project continues and expands the research line set up by Dr. Kossmann since many years, which involves the study of Berber historical linguistics and of contact-induced change in general. This research has been carried out under funding by the KNAW and by NWO during earlier projects. It is moreover linked to the more general line of research in contact linguistics as carried out in LUCL, esp. in the research of Prof. Maarten Mous. Dr. Kossmann has participated in several international projects on contact-induced change.

Project 1:

The typology of Arabic influence on Berber languages and its implications for the general study of contact-induced change

This Post-Doc project constitutes the core of the programme. It consists of a survey and analysis of contact-induced change in Northern Berber languages, followed by an embedding of the results in the framework of the study of contact-induced change in general.

Data collection will take place in two steps. First, through a thorough investigation of published data and analyses concerning Northern Berber, main features of contact-induced change in the field of grammar will be identified. Then, on the basis of an unguided analysis of the data as well as by using existing questionnaires for borrowing typology (e.g. the Manchester grammatical borrowing questionnaire) a check list of parameters adapted to the demands of North-African linguistics will be defined. The main tool for lexical comparison will be the Leipzig Loanword Typology lexical questionnaire, which counts about 1500 items. This questionnaire will be filled in for a representative set of languages, both by using existing materials and by fieldwork. In the course of the project, these data and analyses will be supplemented by the results of the two other projects.

After this, the data will be put together in a manner that provides us with a typological inventory of borrowing and borrowing processes, showing the extent of variation inside Northern Berber. This typological inventory will be used as a tool for general comparison outside the realm of Arabic-Berber contact-induced change. The results will be contrasted to claims and expectations

formulated in the general literature on contact-induced change, with special regard to contact-induced change through maintenance.

Contact-induced change is found on all levels of the language. In the following a few examples will be provided.

<u>Lexicon</u>. Arabic influence on Northern Berber lexicon is very important. In the Leipzig Borrowing Typology Database, a percentage of over 50% of the lexical items in Tarifiyt consists of loanwords – much more than in any other language in the typological sample (Kossmann fc.). The comparative study of lexical borrowing in a representative sample will address questions such as: which parts of lexicon are more affected by borrowing than others, and does borrowing in Northern Berber languages always concern the same parts of the lexicon.

<u>Phonology</u>. Phonological influence of dialectal Arabic on Berber is evident in the general introduction of phonemes which were previously absent in the language. An interesting phenomenon in the treatment of Arabic loan phonemes is their use in the creation of expressive formations. Northern Berber languages often create new words with expressive connotations by means of the addition or substitution of a phoneme. The phonemes used in this addition and substitution are mostly those that are rare or absent in native Berber words, but frequent in words borrowed from Arabic. Thus the Berber word agzin 'puppy' is changed to more expressive aqžun (Kabyle) by the substitution of g by g and of g by g and of g by g and g are primarily found in borrowings from Arabic.

Morphology. Arabic influence on Berber morphology is of a typologically uncommon and highly interesting type. In all Northern Berber languages, most Arabic nouns are not integrated into the Berber morphological system (the reasons behind integration vs. non-integration have never been studied); they keep their own morphological form and their own plural formations (cf. Kossmann ms.). These non-native patterns hardly ever spread to native Berber lexicon. A similar preservation of foreign morphology is found in the pronominal system of some Northern Berber varieties. Thus, in Figuig Berber, some Arabic particles, which are often followed by pronominal suffixes, are taken over as such, including the set of suffixes (Kossmann 1997:186). As a result, there exist two parallel systems of morphology in the language – one used with native lexicon, one with large parts of the borrowed lexicon (Kossmann ms.).

Syntax. There exist, among others, interesting contact features in the realm of relative clauses. Thus, the Arabic distinction between asyndetic relativisation of indefinite heads and relativisation by means of a relative marker with definite heads has been taken over in a large number of Northern Berber languages, where indefinite and definite heads receive different types of relative clauses. In some Berber languages, the Arabic relative particle has been introduced.

The mutual influences of Berber and Arabic on semantics have never been treated in a more than casual way, and this will be the subject of the second PhD project (q.v.).

The project will provide an important contribution to the typology of contact-induced change. It is original in two ways: first, the dialectology of borrowing patterns and matters is rarely undertaken, and second, grammatical and lexical borrowing will be studied in parallel, while there is a strong tendency in the study of contact-induced change to treat them apart.

Project 2. PhD 1: A description of Ghomaran Berber in its relation to surrounding Arabic dialects.

Large-scale borrowing may have important effects on the structure of a language. In particular in languages where borrowed elements are treated in a different way from native elements, a basic question concerns the interaction between borrowed and non-borrowed elements inside one system. In view of the overall importance of parallel system borrowing in Berber, which is a spectacular case of differentiated treatment, one Berber variety has been selected for a PhD project, Ghomara Berber. This language is spoken in a few villages in the northwestern part of Morocco, and is enclosed on all sides by speakers of dialectal Arabic. It seems to be relatively close to the so-called Senhaja de Sraïr languages in the western Rif (Lafkioui 2007), which, themselves, are almost undescribed. Both Ghomaran and Senhaja de Sraïr are quite distant from Tarifiyt, the main Berber language of Northern Morocco. Ghomaran is only superficially known. Until recently, our only data were a few texts published by Colin (1929). These data have now been supplemented by fieldwork in the framework of a MA thesis (El Hannouche 2007), which has clarified many problems, and which will serve as the basis of the discussion below.

Ghomaran Berber is of great importance in the general typology of borrowing (in Berber and elsewhere), as it presents one of the most extreme cases of borrowing of parallel systems. In this borrowing type, elements are taken over including morphology. As shown in recent fieldwork (El Hannouche 2007), and confirmed by older literature, Ghomaran has parallel morphologies on many different levels. In the first place, one finds it in the formation of plural nouns, i.e. Arabic nouns are taken over including their plural forms. In the second place, parallel systems occur in the pronominal system: in cases where a particle borrowed from Arabic is obligatorily followed by a pronominal element, the pronoun has its Arabic shape, e.g. *fħal-u* 'his way', *fħal-əm* 'their way' with Arabic -u 3sg:m and -əm 3pl instead of Berber -s and -sən.

Parallel systems also occur with adjectives. While adjectives based on Berber have the endings - \emptyset (m:sg), - θ (f:sg, pl) (based on the ancient stative conjugation), adjectives borrowed from Arabic have the Arabic endings - \emptyset (m:sg), -a (f:sg), -in (f:pl), e.g. mallul (m:sg), mallul (f:sg, pl) 'white' (< Berber) as opposed to rqiq (m:sg), rqiqa (f:sg), rqiqin (pl) 'slim' (< Arabic).

The most spectacular case of parallel system borrowing is found with verbs. A number of loan-verbs are obligatorily conjugated according to Arabic morphology, while verbs of Berber origin retain their Berber morphology. Cf. the conjugation of the perfective form of a Berber verb (*kšəm* 'go in') as opposed to that of a borrowed verb (*tlaqa* 'meet'):

	Berber verb	Borrowed verb
1sg	kəšm-əx	tlaqi-t
2sg	t-kəšm-ət	tlaqi-t
3sg:m	i-kšəm	tlaqa
3sg:f	t-əkšəm	tlaqa-θ
1pl	n-əkšəm	tlaqi-na
2pl	t-kəšm-əm	tlaqi-θum

In fact, it seems that not only verb morphology, but also the morphology of pronominal clitics is taken over, i.e. a verb with Arabic verb morphology will be accompanied with pronominal clitics borrowed from Arabic, while a verb with Berber morphology is accompanied by Berber clitics. One might assume that this is a case of code-switching rather than borrowing. There are good reasons not to follow this lead. In the first place, the Arabic structures were encountered both in spontaneous texts (where code-switching would be expected) and in elicited paradigms (where, with a confident and reliable informant, code-switching would be very strange). Moreover, the use of the Arabic structures seems to be completely lexically determined, e.g. the verb *tlaqa* 'meet', which is relatively well-attested, is only found with Arabic morphology, and never with Berber affixes or clitics.

Parallel system borrowing on a large scale is not very common (an overview in Kossmann ms.). Parallel systems in verbal morphology are only known from a few other languages, Domari (Matras 2007, only auxiliary verbs), Ajia Varvara Romani (Igla 1996) and Kormakiti Arabic (Kossmann 2008+). One of the central questions with parallel systems in verbs is the way the functions expressed in the donor language by these forms are intergrated (or not) in the recipient language, i.e. to what extent does the introduction of Arabic loan verbs also imply the introduction of non-Berber functions, e.g. in the aspectual system? And how do functions easily encoded in the Berber part of morphology (e.g. centripetal deixis) appear in the Arabic part of the morphology?

This part of the project will focus both on the interaction of the borrowed and on the non-borrowed parts of the system. As there exist no grammar of sufficient quality, it will take the form of a fieldwork-based descriptive grammar, according to the standards in the field of descriptive analysis.

Project 3

A Contrastive study of semantic and complex syntactic structures in two adjacent Berber and Arabic varieties.

This project addresses a subject which has rarely been addressed before in the study of Berber-Arabic language contact: the extent to which semantic and complex syntactic structures converge and diverge between Berber and Arabic varieties spoken in the same region. While some contrastive studies of basic syntactic structures exist (esp. Ennaji 1985), semantic and complex syntactic questions are only addressed in a very unsystematic way. This project proposes to study a set of salient topics in the semantics and syntactic structures of both languages, in order to gain insight into the degree of similiarity to be found. In order to do so, two varieties of Berber and Arabic are chosen: the eastern varieties of Tarifiyt (Northern Morocco) and rural eastern varieties of Moroccan Arabic. For both varieties, the basic morphological and syntactic structures are known. Eastern Tarifiyt is described in Kossmann (2000); eastern Moroccan Arabic is not extremely different from other varieties of Moroccan Arabic, such as the one described, for instance, by Caubet (1993).

The project will deal with the following subjects in the two languages concerned:

- The semantics of space. In recent years, much progress has been achieved in the cross-linguistic description of the expression of space (cf. Levinson & Wilkins 2006). To this end, useful tools and questionnaires have been developed, as well as a theory of the relevant parameters involved, which supplemented by the observation of spontaneous speech will constitute a reference point in the contrastive description of this part of the linguistic systems.
- The semantics of non-spatial prepositions. This part of the project deals with the use of prepositions outside contexts which are immediately linked to the expression of space. It will focus on verb-preposition collocations, and on the various possibilities of opposition in such collocations.
- The semantics of a specific semantic field. On the basis of tools and analyses developed by the Max-Planck-Institut in Nijmegen, the semantic expression of 'put' and 'take' events will be studied.
- The meaning of indirect object constructions. The use of the indirect object in Berber and in Arabic extends over the mere expression of dative events. The uses and meanings of the indirect object in the two languages will be contrasted, following principles such as those set out in Frajzyngier & Shay (2003).
- The syntax of double object constructions. In Berber, for instance, it is possible to have constructions with two direct objects or with two indirect objects, provided that one of the objects is pronominalized, and one is lexical. Once both are pronominalized, or both are lexical, the language has to take recourse to escape strategies (such as substituting one of the direct objects by an indirect object). In this part of the study, the basic structures of double object cojnstructions, and the escape strategies necessitated by morphosyntax will be studied in both languages.
- The syntax of causativation. Berber has a causative/factitive derivation. There are important restrictions to the application of this derivation (which is rare with exclusively transitive verbs, but common with intransitives and labile verbs). In the project, the question of its functioning, and the relationship with similar constructions in Moroccan Arabic (such as the "second stem") will be addressed.

The results of this study will be summarized in a dissertation, whose main question is: to what extent do Eastern Moroccan Berber and Eastern Moroccan Arabic present the same system as regards their semantic and complex syntactic constructions. The study will not address the question of the historical explanation of te convergences and divergences between the system: this subject will be addressed in the PostDoc project.

The carrying out of this project will take place in close collaboration with Dr. Felix Ameka (Leiden University and Max-Planck-Institut für Psycholinguistik, Nijmegen), who is an internationally reknowned expert in the field.

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