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Foreword

Most of the contributions published in this volume were prepared within the framework of the research project «Dynamics of Contacts between Populations and Languages - Lexical and Structural Diffusion and the Genealogies in the Sahel» (Grant Agency of the Czech Republic Project No 405-01-1180) co-ordinated at the Faculty of Humanities, Charles University in Prague in co-operation with the Université de Nice and J. W. Goethe-Universität, Frankfurt-a.-M., and in close co-operation with other centres of research such as CNRS-LLACAN (Paris), Gutenberg Universität (Mainz), Universität Wien, St. Petersburg Universität, etc. At the occasion of the XVIth International Congress of Linguists (Prague 2003), the proposal of the three co-directors of the project (R. Nicolai, R. Vossen and P. Zima) to organise a special workshop on these problems was accepted by the Scientific Committee of the Congress. It was at this workshop that several of the papers published in this volume were presented and discussed mostly in their preliminary forms. Other papers were presented at a special session of the Biennial Chadic Linguistic Conference which took place at the Faculty of Humanities, Charles University in October, 2003. It was at this occasion that links with Indiana University (Bloomington, USA) were established. The present volume appears in its final form in a close co-operation of the Faculty of Humanities, Charles University, with CNRS-LLACAN, Paris, thanks to the Grant Agency of the Czech Republic.

The purpose of the project was to examine the linguistic situation in the Sahel in view of the recent developments in the study of language contacts, assessing the reality of the Sahel Sprachbund. The concept of Sprachbund, or ‘linguistic area’ as a bundle of features common to languages over a geographical area has experienced considerable extension: from phonology and morphology, its domain has been extended to morphosyntax and lexicon. By doing so, the concepts of calquing, typological convergence, relexification and metatypy are being used to characterize the processes witnessed in the study of language contacts.

The following questionnaire regarding the areal distribution of TAM (Tense-Aspect-Mood) paradigms and functions in the Sahel was elaborated and discussed at these working sessions:
1. Is there a Split-Predicative (Subject-Pronoun Complex) or a Verbal Affix Complex TAM marking, or both, or are there transitional phenomena?

2. Is there a SAuxOV, SAuxVO or other word-order?

3. Is there a «classical» negation of TAM paradigms (addition of a negative marker to the positive TAM paradigms) or a «suppletive» one (i.e. the existence of fully or partly different TAM markers paradigms in negative constructions)? Are all TAMs or some TAMs concerned, and which ones? Is there any difference between central and periphery (periphrastic) TAM paradigms?

4. Is there a contrast of modality, such as, minimally, a contrast between indicative and non-indicative paradigms?

5. Is there a relation between 3 and 4? In other words, is negation partly or fully different in indicative and non-indicative forms?

6. Is there a contrast between Pf and Ipf paradigms?

7. Is there a syntactical conditioning of TAMs (as that of relative vs. non-relative, focussed vs. non-focussed forms in Hausa or Fula etc.)?

While papers published in Section I of this volume are oriented towards general problems of Sprachbund studies with particular focus on the West African Sahel area, several papers published in section II of this volume represent - directly or indirectly - various sorts of preliminary answers to the concrete problems of the areal manifestation of such verbal phenomena, as formulated above.

In the first paper, P. Zima defines and examines the relevance of the various concepts used in the Sprachbund studies. He argues that the theory of relexification developed by creolists and the theory of lexical diffusion linked with the concept of metatypy originating in the Pacific and Amerindian language areas share certain common features. Consequently, “Sprachbund” represents such an idealising extreme generalisation as are such traditional concepts as “dialects”, or may be even other -lects.

A. Aikhenvald we examines some problems in language contact, focussing on borrowing patterns rather than forms and discusses the notion of linguistic area. Convergence as a major outcome of long-standing multilateral interaction in language contact is analysed in the light of system-altering and system-preserving changes, and sociolinguistic parameters. She illustrates her study with numerous examples from the the African continent whose linguistic diversity in terms of genetic groupings, areal clusters and Sprachbunds of varied extent and antiquity remains the most challenging testing ground for the comparative method, and for contact linguistics.

R. Nicolas examines the Songhay-Mandé situation and argues that, despite certain limited convergence features appearing with particular language contacts, most
isomorphic features are to be explained in the light of the process of the constitution of Songhay as an emerging language. Areal convergence features supposed to be the roots of the present affinities are to be considered as a mere heuristic assumption, hoping to explain the existing isomorphisms through a premature generalization of principles experimented elsewhere.

R. Vossen and S. Ermisch examine the phenomena of language retainment and language shift in the Bisa-speaking community in South-Central Burkina Faso. They want to find why the Bisa language has been abandoned by two fifths of the Bisa population whereas neither the Bisa language nor its speakers’ identity seem to be affected.

V. Černý et al.’s paper deals with the mtDNA sequences of four Chadic populations (Hide, Kotoko, Mafa and Massa) from Northern Cameroon, whose biological samples were collected during anthropological research in the area of their homeland. The paper is trying to examine these molecular genetic observations in the light of recent linguistic and archaeological achievements which consider the Chadic branch in the Afro-Asiatic phyllum to be of eastern origin. The analysis of molecular variance, FST genetic distances and phylogeographic analysis revealed that more than half of the Chadic mtDNA sequences of Northern Cameroon can be traced to the region around the Upper and Middle Nile Valley and the Eastern Africa. However, the results show rather important geographical clustering than the correlation of common linguistic classification with molecular genetic data. Moreover, the dating of diversification of a mtDNA cluster specific for the Chadic mtDNA diversification do not coincide with glottochronological and archaeological reconstructions of proto-Chadic settlement in southern part of Chad Basin.

B. Caron studies the pronominal and TAM system of eight closely related Chadic languages spoken in Northern Nigeria: Zaranda, Langas, Dir, Danche, Baraza, Dott, Sigidi and Zaar. Their system has undergone extensive erosion and realignment. As far as TAM systems are concerned, Zaar stands out as oddly ‘original’: it has three tone levels, when the others have two; it has ten TAM paradigms that can combine, when the others only have between three and five that don’t; it marks aspect, tense and mood, whereas the others don’t express time in their verbal system, the future being a clear case of mood subcategorization. These differences have sociolinguistic origins: the Zaars have come to their present situation by incorporating exogeneous populations which are still identified by the clan system: Angas, Boi, Pyem, Jaar, etc. It has resulted in a complexification of the language which goes against the general assumption that when absorbing a large quantity of foreign population, a language goes through a process of pidginization.
N. Cyffer presents a study of the expression of time in the TAM system of Saharan languages (Kanuri, Teda-Daza and Beria). Comparing earlier studies of Kanuri, such as S.W. Koelle’s Kanuri grammar (1854), with its present TAM system, the author establishes the emergence of new sub-categories and a change of meaning and function of TAM categories in course of time. He also observes some vicinity to TAM uses between Kanuri, Hausa and Fulfulde. As these similarities go in line with other similar grammatical patterns (e.g. clause subordination), he proposes that areal contact features had an impact on the Kanuri grammar. In this context the question of linguistic alliances or even ‘Sprachbund’ comes up.

N. Dobronravin examines the interpretation of Hausa TAM markers in Littafen nahowotn hausance, an Arabic-script work written not later than 1907 somewhere in today’s Ghana. An early attempt to define parts of speech in Hausa made by a Hausa speaker is discussed. The anonymous amateur linguist used the Hausa word suna for both verbs and nouns, and referred to aiki (‘work ; job ; action’) when he wrote about tense, aspect and mood, so practically about Hausa TAM markers. Only in the latter case was the word aiki apparently used as a term for a category opposed to suna. The split interpretation of Hausa verbs (verbal “infinitive” as a “noun” and the TAM marker as a “verb”) is not entirely unanticipated, if one takes into consideration the peculiarities of the Imperfective forms in Hausa, especially in the North-Western dialect cluster.

P. Gottschligg studies the expression of middle voice and syntactic markedness (“relative tenses”) in Atlantic languages, and more particularly in Fula, focussing on whether it is a derivational or inflectional category. This article demonstrates that Common Fula middle-voice inflections result from a fusion with a middle derivative, which is still visible in combination with certain other derivatives. He describes various processes of elaboration and simplification in Fula dialects, and attributes these variations to pidginisation in situations where the major contact languages were typologically opposed to the internal developments.

H. Jungraithmayr presents a short history and an overview of the dominant topics of research on the Chadic verb. The description and interpretation of the verbal piece and its characteristic features follow. The sequence of stages in the development of verbal stem types as already outlined by the author in 1978 is being discussed: verb stem inflection, segmental or tonal, is replaced by verb stem immobility and stem-external TAM productivity. The paper concludes by highlighting the most important issues of Chadic verb morphology as well as by hinting at the most urgent needs of future research in the field.

R. Kastenholz studies “Split Predicate Syntax” in Mande languages : invariant particles functioning as auxiliaries, are involved in the constitution of the clause. Inflectional marking and verbal semantics are thus “distributed”, i.e. they are expressed by different elements in different syntactic positions. Some languages
the TAM system of Saharan. Earlier studies of Kanuri, present TAM system, the s and a change of meaning also observes some vicinity these similarities go in line uboration), he proposes ri grammar. In this context ri comes up.

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The paper concludes by morphology as well as by the field.

And syntactic markedness particularly in Fula, focussing y. This view of the dominant topics interpretation of the verbal sequence of stages in the d by the author in 1978 is, is replaced by verb stem The paper concludes by morphology as well as by the field.

Mande languages: invariant e constitution of the clause. "distributed", i.e. they are positions. Some languages express near to all grammatical information by means of predicate markers for most, if not all TAM categories (e.g. Bambara, Koranko); in other languages, split predicate syntax is synchronically less prominent or even marginal (e.g. Jogo, Bobji). For a number of Western Mande languages, inflectional marking (i.e. to distinguish aspects like perfective vs. imperfective) is thus not predominantly marked with the predicate markers. It is suggested that, in a diachronic perspective, evidence from this type of languages should be taken into account.

R. Leger & U. Zoch examine the characteristic features of the pronominal systems in the southern Bole-Tangale languages from a synchronic and comparative view, paying special attention to logophoricity. They observe a dichotomy between the geographical northern and southern Bole-Tangale-languages not only in the difference of the grammatical gender in nouns, but also in the closely related pronominal systems. Gender levelling and the appearance of logophoric pronouns in the southern languages can be explained by historical contacts between the Chadic and surrounding Adamawa/Benue-Congo languages. They insist that the idea of expressing logophoricity by using special pronouns is contact induced, not the morphological forms of the pronouns.

In a short note on the Kanakuru TAM system, P. Newman presents a useful summary of his 1974 description of this Chadic language. He establishes some structural features such as the presence of split predicate syntax together with inflection in the verb form, and syntactic markedness in relation with focus, relativization and negation.

Finally, as a conclusion to the volume, P. Zima examines some properties that the TAM verbal/predicate systems in various language groups of the West African Sahel have in common: structural and typological similarities, if not identities, disregarding their different origins, and present/past geographical locations. He proposes that these structural, typological (and sometimes also formal) similarities may be grouped into three complexes, i.e. Split Predicate (or SP+/− Aux) vs Verbal Stem (VS) TAM marking, the Modal dichotomy of contrasting Indicative vs. Non-indicative appearing to have strong ties with the different types of Polarity, i.e. the dichotomy of contrasting Positive vs. Negative paradigms, and last but not least, the syntactic alternation of Neutral vs. Focus TAM paradigms. He recommends that the questions of their distribution, origins (roots) and present dynamics should be formulated and answered.

The Editors
Reflections on language contact, areal diffusion, and mechanisms of linguistic change

Alexandra Y. AIKHENVALD

Research Centre for Linguistic Typology, La Trobe University, Melbourne

Abstract

If two languages are in contact, with many speakers of one having some knowledge of the other language, then they typically borrow linguistic features back and forth—be it pronouns, significant sounds (phonemes), grammatical categories, vocabulary items, and even grammatical forms. Borrowing typically extends over all or most of the languages in a geographical region, so that we get large-scale linguistic diffusion, defining the region as a 'linguistic area'. One of the hardest tasks in comparative linguistics is distinguishing between similarities due to genetic inheritance and those due to borrowing. In this paper, we look at recurrent problems in language contact, focussing on borrowing patterns rather than forms and discussing the notion of linguistic area. Convergence as a major outcome of long-standing multilateral interaction in language contact is analysed in the light of system-altering and system-preserving changes, and sociolinguistic parameters. The African continent - with its linguistic diversity in terms of genetic groupings, areal clusters and Sprachbunds of varied extent and antiquity - remains the most challenging testing ground for the comparative method, and for contact linguistics.

Résumé

Si deux langues sont en contact, et qu'un grand nombre de locuteurs de l'une ont une certaine connaissance de l'autre, ils échangent alors des traits linguistiques tels que des habitudes de prononciation, des sons pertinents (phonèmes), des catégories grammaticales, des éléments de vocabulaire et même des formes grammaticales. Si les emprunts couvrent de manière significative toutes ou la plupart des langues d'une région géographique, l'on obtient une diffusion linguistique à grande échelle aboutissant à l'identification de la région comme une 'aire linguistique'. L'une des tâches les plus ardues en linguistique comparative consiste à distinguer les similarités dues à l'héritage génétique de celles dues à l'emprunt. Dans cet article, nous examinons les problèmes récurrents dans les situations de contacts de langues en insistant sur les modèles d'emprunt plutôt que sur les formes empruntées, afin de cerner la notion d'aire linguistique. La convergence en tant que résultat d'une interaction multilatérale de longue durée est analysée en fonction des changements qui modifient ou préservent les systèmes, ainsi que des paramètres sociolinguistiques. Le continent africain - avec sa diversité linguistique en termes de groupements génétiques, d'agrégats aréaux et de Sprachbunds de dimension et d'âge variables - reste le terrain d'expérimentation le plus stimulant pour la méthode comparatiste et pour l'étude du contact des langues.
1. INTRODUCTORY REMARKS

Languages can resemble each other in the categories, constructions and types of meaning they use, and in the forms they employ to express these. These similarities may be due to universal properties: for instance, all languages have clausal negation, or a way of expressing a command, or of forming a question. Two languages can share the same form by pure coincidence. The Korean word for 'two', pronounced as [du], bears a chance similarity to Latin duo ‘two’ (also see Aikhenvald and Dixon 2001a: 1-2). Similarities of these kinds tell us nothing about the history of languages.

If two modern languages descend from a common ancestor, both may retain features of this shared ‘proto-language’. Their similarities are then due to genetic inheritance. Genetically related languages often develop similar categories – this process, termed ‘drift’ by Sapir (1921: 147-170), is also known as ‘parallel development’ (LaPolla 1994).

If two languages are in contact, with many speakers of one having some knowledge of the other language, then they typically borrow linguistic features back and forth – habits of pronunciation, significant sounds (phonemes), grammatical categories, vocabulary items and even grammatical forms. Borrowing typically extends over all or most of the languages in a geographical region, so that we get large-scale linguistic diffusion, defining the region as a ‘linguistic area’.

It has long been recognised that one of the hardest tasks in comparative linguistics is distinguishing between similarities due to genetic inheritance and those due to borrowing (cf. the classic debate between Sapir and Boas). As Dench (2001: 113) put it, ‘making the argument for an innovation shared by virtue of a period of common development is never easy. I take it for granted that a statement of shared inheritance as explanation for a shared feature should only be made once all other possible explanations for the shared feature have been exhausted. These other possibilities will include accidental similarity in form, borrowing and genetic drift.’

We now look at recurrent problems in language contact, focussing on borrowing patterns rather than forms (§2). In §3, we discuss the notion of linguistic area. Some outcomes of long-standing multilateral interaction in language contact are outlined in §4.

2. LINGUISTIC DIFFUSION AND BORROWING

Before we proceed, a few terminological remarks are in order. The term ‘borrowing’ is used here in its broad sense, as ‘the transfer of linguistic features of
language contact, areal diffusion, and linguistic change

any kind from one language to another as the result of contact' (Trask 2000: 44). Linguistic diffusion is understood as the spread of a linguistic feature across a geographical area or as borrowing within a linguistic area. Within an area, diffusion can be unilateral (when it proceeds from one source) or multilateral (when it involves several sources). Another alternative term for linguistic diffusion is interference, defined as the transfer of features from one's first language into one's second language (cf. Trask 2000: 169). Unlike diffusion, interference applies to cases of individual bilingualism and second language acquisition.

It is useful to distinguish between borrowing – or diffusion – of forms and of patterns. Diffusion or borrowing of forms is also known as direct diffusion. For instance, Baale, a South-West Surmic language, borrowed an aspectual particle \textit{wa} 'just now, recently' from Tirma and Chai, languages of the South-East branch of the same family (Dimmendaal 2001: 363). Indirect diffusion, sometimes also called 'transfer of patterns' (Heath 1978), involves developing a new category or a new term of a category, to match a pattern in the source language. For instance, a language can develop a system of noun classes, switch-reference or evidentiality out of its own formal resources. In Luo, a Nilotic language, heads of endocentric compounds are developing into noun class prefixes as a result of influence from the neighbouring Bantu languages (Dimmendaal 2001: 382); see Cyffer (2002: 41) for similar examples in Kanuri.

Indirect diffusion may be manifested in identical derivations and structurally similar idioms, such as compounds which literally mean 'breast mouth' and 'house leg' and translate as 'nipple' and 'wall' respectively, in both Baale and Tirma and Chai. In each case the absence of a particular pattern in a closely related language is an indicator of its areal origin: thus, nominal compounds found in both Baale and Tirma-Chai are absent from Baale's closest relatives, the Didinga-Muric languages from the South-West subgroup of Surmic (Dimmendaal 2001: 363).

Prosodic features are particularly prone to diffusion in language contact. Jungraftmayr (2000: 93) reports that 'the employment of tone in verb-aspectual systems', prominent in Benue-Congo, Adamawa-Ubangi and other Niger-Congo languages spoken next to Chadic languages, made its way into Chadic. As a result, in southeastern fringe Chadic languages such as Tumak and Zime, which are in contact with Niger-Congo languages, the perfective-imperfective opposition is marked by tone change, as shown in Table 1. The use of tones for marking aspects is remarkably similar to that found in Niger-Congo languages, such as Obaya, an Ubangi language from the same area as the southeastern fringe Chadic. Eastern

\footnote{A recently suggested alternative to this term is 'code-copying' (see Johnson 2002). Borrowing ought to be distinguished from 'the alternative use of two languages either within a sentence or between sentences' (Clyne 1987: 740). This covers code-switching and code-mixing. See Hill and Hill (1986: 348), for a differentiation 'between meaningful and appropriate code-switching [i.e. which follows established conventions and practices – A.A.] and disorderly usage of the type which has been called \textit{code-mixing}'.}
Chadic languages spoken outside the contact area mark this same opposition by ablaut, or vowel change, as does Mubi, shown in the last row of Table 1.

Table 1. Contact induced use of tone for aspect marking in Chadic languages

<table>
<thead>
<tr>
<th>LANGUAGE AND ITS AFFILIATION</th>
<th>GLOSS PERFECTIVE</th>
<th>IMPERFECTIVE</th>
<th>MARKING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tumak (southeastern Chadic)</td>
<td>'die' má (high tone)</td>
<td>ma (mid tone)</td>
<td>tone</td>
</tr>
<tr>
<td>Zime (Bama) (southeastern Chadic)</td>
<td>'die' má (high tone)</td>
<td>mà (mid tone)</td>
<td>tone</td>
</tr>
<tr>
<td>Gbaya (Ubangian, Niger-Congo)</td>
<td>'see' zóm (low tone)</td>
<td>zók (high tone)</td>
<td>tone</td>
</tr>
<tr>
<td>Mubi (eastern Chadic)</td>
<td>'die' mà (high tone)</td>
<td>mà (mid tone)</td>
<td>ablaut</td>
</tr>
</tbody>
</table>

The use of ablaut for aspect marking has hardly ever been borrowed into any Niger-Congo language (with a possible exception of Lall, an Ubangian language which seems to have traces of Chadic-type vowel alternations in verbal morphology; Jungraithmayr 2000: 94). This illustrates, in a nutshell, how different linguistic features vary in their ‘proneness’ to diffusion. We have seen, in Table 1, that the functions of tones may diffuse. Alternatively, types of tonal distinctions can spread within an area. Kastenhofz (2002) provides ample discussion of how different dialectal areas of Mande have developed different numbers of tonal distinctions (from two to four), depending on the languages they are in contact with.

Only a careful examination of the diffusion of linguistic features between genetically unrelated and typologically different languages in varied situations of language contact allows us to determine tendencies and preferences in contact-induced grammatical change (though this does not have to involve establishing straightforward ‘hierarchies’ of borrowability).

Both direct and indirect diffusion may involve simultaneous gain (of new morphemes and patterns) and loss (of old morphemes and patterns). Or it may involve creating new patterns which coexist with the old ones, together with new rules for the distribution of old patterns.

The distinction between diffusion of forms and diffusion of patterns is crucial, since linguistic communities differ with respect to their acceptance of loan forms. Some adopt loan forms on a large scale, while others consider using ‘foreign’ importations as a token of unacceptable language-mixing. One Arawak language, Tariana, has a prohibition against borrowing forms from its neighbours, while Resigaro — another Arawak language spoken in a different region — borrows them freely (see Aikhenvald 2002: 5-6). As Heine and Kuteva (2001: 410) put it, ‘it may happen that people borrow a comparative or a reflexive morpheme from another language but [...] they are more likely to borrow conceptual templates, like event schemas’.

---

2 The diffusability of prosodic features (including tone and accent type) has also been illustrated by Matiross (2001), using the material of South-East Asian languages.
3. LINGUISTIC AREAS

The concept of linguistic area, or Sprachbund, is central to the notion of diffusion. A linguistic area is generally taken to be a geographically delimited region including languages from at least two language families, or different subgroups of the same family, sharing significant traits (most of which are not found in languages from these families or subgroups spoken outside the area). Languages within an area must share a fair number of distinctive diagnostic traits (also see Emerencian 1956; Sherzer 1973: 760; and discussion in Tosco 2000).

The main problem is how to locate the diagnostic traits, especially when at least some shared features — or similarities — between contiguous languages can be explained by accident, universals, genetic factors (that is, in a situation where the languages in contact are related), etc. As shown in the masterly study of Mesoamerica as a linguistic area by Campbell, Kaufman and Smith-Stark (1986: 535-6), not all shared features have the same ‘weight’: highly ‘marked’ exotic, or unique shared traits weigh more than does material that is more easily developed independently, or found widely in other languages’. Since ‘meaningful linguistic areas are the historical products of linguistic diffusion, the stronger linguistic areas are those whose shared traits can be shown to be diffused — and cannot be ascribed to a common ancestor, to chance, or to universals’. Thus, a highly frequent phenomenon — such as for instance verb-final constituent order, the existence of nasalised vowels, or the presence of a perfective-imperfective opposition in the aspectual system — would not be assigned as much weight as a more exotic, unusual characteristic. An example of such an exotic feature is the suppletive formation of negative and positive paradigms found in Mande languages (Zima forthcoming; Kastenholz 2002), as well as in Songhay and in Hausa (Zima forthcoming).

Drastic changes in the use of syntactic constructions (as is, for instance, the case for infinitives in the languages of the Balkans) or in morpheme shape in the languages within an area could be seen as a highly distinctive trait, indicative of areal diffusion. Such features could be unusual for a subgroup or a family, without being typologically ‘exotic’. For instance, Chadic languages in contact with Kwa languages have developed a Kwa-like monosyllabic word-structure (Jungraitmay 2000: 94). Cross-linguistically, having monosyllabic lexemes is not unusual. But this feature is not found in Chadic languages outside the contact area. Since the source of diffusion (from Kwa to Chadic) can be easily established, this feature can be assigned special weight. Along similar lines, the reciprocal is marked with a suffix on a verb in Oceanic languages on the northwest coast of West New Britain.

3 An alternative use of the term ‘linguistic area’ just for bilateral interaction between languages, reserving the term ‘Sprachbund’ for multilateral areas, was proposed by Thomason and Kaufman (1988); this, however, goes against the mainstream terminological consensus: see Zima (2000a; 2002).
rather than with a prefix, as in Oceanic languages elsewhere. By itself, this is not an exotic feature. However, the languages of West New Britain share it with their (unrelated) neighbour, a Papuan language Anêm; an obviously diffusional origin of this trait makes it a distinctive diffusional characteristic of the area (Thurston 1987: 79-80).

A typologically well-attested property cannot by itself be considered areadefining. However, the way properties cluster can be area-specific. In a classic paper, Campbell, Kaufman and Smith-Stark (1986) single out four morphosyntactic features characteristic of the Meso-American area:

(a) nominal possession of the type his-dog the man;
(b) relational nouns (that is, body part nouns used as markers of spatial relationships);
(c) vigesimal numeral systems;
(d) non-verb final basic word order which may correlate with the absence of switch reference;
(e) numerous ‘pan-Meso-American’ formations, e.g. ‘knee’ as ‘head of the leg’, or ‘boa-constrictor’ as ‘deer-snake’.

Along similar lines, a combination of properties defines the multilingual linguistic area of the Vaupés River Basin in Brazil and Colombia with languages belonging to genetically unrelated Tucanoan and Arawak families. These include:

(i) nasalisation as a prosodic feature;
(ii) four to five evidentials marking the way in which the speaker has acquired the information (whether seen, heard, inferred, assumed, or learnt from someone else);
(iii) numerous classifiers used with demonstratives, numerals and in possessive constructions;
(iv) small systems of genders in verbal agreement;
(v) nominative-accusative profile;
(vi) one locative case covering direction (‘to’), location (‘in, at’) and source (‘from’);
(vii) numerous identical formations, e.g. ‘father of goods’ = ‘rich man’.

None of these properties is restricted to Meso-America or to the Vaupés area. The way in which they occur together is area-specific. Similarly, none of the properties given for Mainland South-East Asia as a linguistic area (see Matisoff 2001; Enfield 2001) is unique; however, the way they go together accounts for the existence of a ‘pan-South-East Asian’ area. The ‘clustering’ of features may be significant, while the features themselves are not necessarily so.

The question of how many features are sufficient to delimit an area (see Haig 2001) relates to the ‘weight’ of each individual feature, and to the ways in which
the properties cluster together. Areas can be created on ‘different levels’; that is, in a particular linguistic situation one might expect more areal diffusion in one type of linguistic feature than in another. The great majority of the shared features of Standard Average European are syntactic, while one of the most salient features of the South-East Asian languages is their ‘monosyllabic’ and ‘tone-proneness’ (hence the term *Tobund*, ‘tonal area’: Matisoff 2001). And see Jakobson (1938), on the idea of a ‘phonological’ Sprachbund in Eurasia.

The problems with establishing genetically inherited versus diffusional features in North-American Indian languages north of Mexico have been analysed in Sherzer (1976), and Bright and Sherzer (1976). For Australia, problems of this kind have been analysed by Dixon (2002). To disentangle various types of similarities between related languages, a fine-grained reconstruction on the level of individual subgroupings is needed, as is the case with Indo-European languages in the Balkan linguistic area. Otherwise one would never be able to go beyond just saying that ‘Sprachbund situations are notoriously messy’ (Thomason and Kaufman 1988: 95).

When closely related languages are in constant contact, additional complications arise. Teasing apart the effects of diffusion, genetically inherited phenomena and the possible outcomes of parallel development is often a daunting – and an almost impossible – task. Languages which have never been in contact or never formed a linguistic area can share diffused properties if they have borrowed the features independently from the same or a similar source. This was probably the case for numerous Ethio-Semitic languages which share similar features, taken from shared Cushitic substrata (Tosco 2000).

4. CONVERGENCE IN AREAL DIFFUSION

Intensive contact within a linguistic area tends to bring about the gradual convergence of languages whereby the conceptual categories of one language are replicated in another. Borrowing a conceptual template rather than a morpheme brings about the enrichment of patterns in a target language. The diffusion of evidentiality distinctions in the Vaupés River Basin area in northwest Amazonia resulted in languages developing detailed means of marking the ways of information acquisition, allowing one to be precise in the statements made. Along similar lines, Abbi (2002) demonstrated how Santhali and Kharia, Munda languages from India, have adopted new means of causative formation from the neighbouring Indo-Aryan languages, in addition to the previously existing ones, evolving complex rules of different causative choices for different verb types.

Alternatively, languages may simply lose the patterns absent from other languages in the same area. Jungrathmayer and Leger (2002) showed how Southern Bole-Tangale languages (Chadic) are losing nominal plurals and the morphological distinctions between transitive and intransitive verbs, which are absent from the
neighbouring Central Jukunoid and Adamawa languages. Southern Bole-Tangale languages are also restructuring their gender system: many erstwhile masculine nouns are shifting to the formally unmarked feminine class, thus reducing the functional load of gender differentiation. Jungrauhmayr and Leger (2002: 84) hypothesise that this is 'a last stage of development [...] towards the total loss of gender', another category not found in either Central Jukunoid or Adamawa.

Within a linguistic area, the multilateral diffusion of linguistic features often goes together with creating new types of categories which may lack an exact match in any language within the area. Their contact-induced changes involve a variety of mechanisms including (see Aikhenvald 2002):

(a) Reanalysis, i.e. a historical process whereby a morphosyntactic device acquires a different structure from the one it originally had, with little or no change to its surface form or semantics. A number of verbs in Udi (a Northeast Caucasian language) - which originally contained noun class agreement markers - were reanalysed as simple stems, as part of the process of losing the noun class system (Harris and Campbell 1995: 66-7).

(b) Reinterpretation, or extension, of already existing morphemes and categories, whereby they start being used in a variety of new contexts (see Harris and Campbell 1995: 66-7).

(c) Grammaticalisation, that is, 'the development from lexical to grammatical forms and from grammatical to even more grammatical forms' (Heine and Kuteva 2002: 2), as is the case for the development of proximative aspect using the verb 'become' in Nandi, a Nilotic language, under the influence of the Bantu language Gusii (Kuteva 2000). (Further examples of contact-induced grammaticalization of lexical items have been described by Bisang 1996 and Matisoff 1991, for South-East Asia.)

(d) Grammatical accommodation, defined as morphosyntactic deployment of a native morpheme on the model of the syntactic function of a phonetically similar morpheme in the diffusing language, that is, the language which is the source of diffusion. This is also known as 'shift due to phonetic similarity' (Campbell 1987). Watkins (2001: 58) shows how the influence of the Hittite imperfective marker -ske- on Eastern Ionic Greek resulted in the development of an imperfective meaning by the homophonous Greek morpheme. In Pipil, a Uto-Aztecan language (Campbell 1987: 263-264), a marker of possession -pal was originally a relational noun, as in nu-pal 'mine', mu-pal 'yours' and so on. On the basis of similarity with Spanish para 'for, in order to', this morpheme can now appear without any prefixes and have the meaning of 'in order to, so that', being used to introduce a subordinate clause (see similar examples in Aikhenvald 2002: 225-6).

These mechanisms are closely linked. Both reanalysis and grammatical accommodation most often go together with reinterpretation of categories and
forms. Whether grammaticalisation and reanalysis are to be considered separate mechanisms remains a matter for debate (see Harris and Campbell 1995: 92, for a summary). While it can be argued that every instance of grammaticalisation involves reanalysis, reanalysis can occur without grammaticalisation. This provides justification for distinguishing the four processes outlined above.

Language contact may bring about gradual convergence resulting in structural isomorphism, whereby the grammar and semantics of one language are almost fully replicated in another (cf. Gumperz and Wilson 1971; Nadkarni 1975; Friedman 1997). This process has also been defined as metatypy by Ross (2001: 146), implying ‘reorganisation of the language’s semantic patterns and ways of saying things, and the restructuring of its syntax’. An example of structural isomorphism comes from two languages in contact within the Vaupés River Basin linguistic area. Example (1) is from Tariana, an Arawak language, and (2) is from Tucano, a Tucanoan language. Example (3) comes from Baniwa, an Arawak language closely related to Tariana, but spoken outside the Vaupés area. The Baniwa morphemes are obviously cognate to Tariana, but the categories and the meanings expressed are very different.\(^4\)

**Tariana**

(1) паита di-fiha-yena-naka
one+NUM.CLASS. ANIMATE 3sgnf-eat-pass.go.by/do.little.by.little-PRESENT.VISUAL
*One (person) is eating little by little’ (I see him)*

**Tucano**

(2) ni'ki ba'aga-tiha-mi
one+NUM.CLASS. ANIMATE eat-do.little.by.little-PRESENT.VISUAL.3.person.sg.masc
*One (person) is eating little by little’ (I see him)*

**Baniwa**

(3) apaite li-fiha li-dgena
one+NUM.CLASS. MASCULINE 3sgnf-eat 3sgnf-pass.go.by
*One (man) is eating too much!*

Firstly, unlike Tariana and Tucano, Baniwa has no obligatory tense and evidentiality. Secondly, Tariana and Tucano have a numeral classifier for animate referents, while the Baniwa form cognate to Tariana refers to male humans. And thirdly, the same etymon, Tariana -yena and Baniwa -dgena ‘pass, go by’, has developed different meanings in the two languages: in Baniwa, it means ‘exceed, do too much’, and in Tariana, it means ‘do little by little’.

All the Tucano categories are replicated in Tariana. Consequently, the same interlinear gloss applies to both (1) and (2), with just one difference. While Tucano

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\(^4\) Abbreviations are: masc - masculine; nf - nonfeminine; NUM.CLASS - numeral classifier; sg - singular.
is exclusively suffixing, Tariana maintains a few prefixes (inherited from Proto-Arawak). Unlike Tariana, Tucano marks person with portmanteau morphemes fused with evidentiality and tense. This illustrates an instance of almost complete convergence, resulting from intensive areal diffusion.

Linguistic convergence does not always result in the creation of identical grammars, nor in the straightforward projection of categories from one language into another. That is, structural and conceptual isomorphism and the creation of almost identical grammatical and semantic structures (illustrated by Friedman 1997, among others) are not universal outcomes of language contact. Languages in contact often maintain their distinct typological profiles.

Convergence may involve at least three kinds of processes, each with a distinct outcome:

(i) Convergence can result in the adoption of new patterns by all languages. New patterns coexist with the old ones, and new rules for their distribution are developed. (This is somewhat comparable to the creation of etymological doublets—i.e. different words borrowed at different times which develop different meanings in the recipient language, e.g. English chief and chef, both from French chef.) The isomorphism of grammatical structures is not complete since each language preserves its own ‘typological profile’ alongside the adoption of a ‘foreign’ one. An example of this is the linguistic area of the Vaupés River Basin—we have seen, in examples (1) and (2), how Tariana has adopted the categories found in Tucanoan languages, and at the same time maintained its own prefixing structure.

(ii) Alternatively, convergence can result in creating a new common grammar, which combines features of both systems in contact—a compromise between the structures. Grammatical isomorphism may be almost complete. An example is the language contact situation between Yucuna, an Arawak language, and Retuará, from the Tucanoan family. Neither language qualifies as ‘typically Arawak’ or ‘typically Tucanoan’; in actual fact, each language has adopted features from the other, creating a new common ground. So, for instance, Retuará has acquired a few prefixes, while Yucuna lost the Arawak active-static split system originally expressed with a combination of pronominal prefixes and suffixes.

Convergence of types (i) and (ii) presupposes the lack of any relationships of dominance or diglossia (in terms of a high language-low language relationship) between the languages in contact: that is, no language (or community of language speakers) has more prestige than their neighbours.

(iii) Convergence can also involve the adoption of the structure of another language and concomitant loss of categories which have no equivalent in the other language. The necessary condition for this is a relationship of dominance between
languages. This kind of convergence involves the loss of patterns and is often accompanied by the attrition and obsolescence of the ‘minority’ language. It results in morpheme-for-morpheme intertranslatability between the languages in contact. Thus, numerous endangered languages undergo restructuring under the influence of the majority language, as was the case with Arvenitika Albanian (Tsitsipis 1998) restructured under the influence of the dominant Greek; and with Retígaro, a moribund Arawak language from northeastern Peru, under the influence of the dominant Bora (a Bora-Wilotoan language) (Aikhenvald 2002: 5-6; 269).

In all these cases convergence involves system-altering changes and restructuring of at least one of the languages in contact. A head-marking language can acquire dependent-marking properties; a suffixing language may acquire prefixes (and lose suffixes); an active-stative language may acquire nominative-accusative properties.

The very idea of such restructuring and concomitant system-altering changes goes against the oft-quoted ‘structural compatibility requirement’. In its strong form, this requirement states that grammatical borrowing (viewed broadly) can operate only between similar systems (cf. Meillet 1914: 84, 87; Moravcsik 1978; Weinreich 1953: 25 etc.). This claim holds only as a tendency (as demonstrated by Harris and Campbell 1995, and also Haig 2001). Examples of the three types of convergence — discussed above — show the ways in which languages come to be structurally similar due to areal diffusion, notwithstanding the original differences in their grammar.

Many more questions concerning linguistic convergence arise. How does the diffusion of features start, and what are the sociolinguistic and purely structural factors which may or may not enhance it? Which features are more — and which are less — prone to diffusion? How does a language community adopt certain linguistic features as ‘emblematic’ of their ethnicity? And — a particularly important question, especially relevant for areas of the world known to have been populated for tens of thousands of years (such as Africa or Australia) — can extensive language contact over a lengthy period of time, with features and forms being borrowed back and forth, obscure pre-existing genetic relationships? As Dench (2001: 113-114) put it, ‘it may not be possible to show conclusively for any particular innovation that it results from genetic inheritance rather than that it is motivated by contact with another language. If enough such cases occur, then the suspicion we might attach to any putative inherited innovation will mount and we should become increasingly sceptical of any suggested genetic classification.’ In Dench’s words, ‘we should leave open the possibility that all questions may turn out to be undecidable’.
Only in-depth studies, based on first-hand data, will enable us to formulate sensible inductive generalisations concerning the ways in which genetically unrelated or distantly related languages become similar due to prolonged contact, multilingualism and borrowing. Such studies have been accomplished for just a few places in the world; examples include the Balkan linguistic area (e.g. Joseph 1983; Friedman 1997 and references therein), India (e.g. Emeneau 1980; Masica 1976), the East Arnhem Land and the Daly River regions in Australia (Heath 1978; Dixon 2002: 674–9), the Vaupés linguistic area in north-west Amazonia (Aikhenvald 2002). Within Africa, arguments have been put forward in favour of considering a wide area around the Lake Chad as a Sprachbund (Cyffer 2002).

With its linguistic diversity in terms of genetic groupings, areal clusters and Sprachbunds of varied extent and antiquity, the African continent remains the most challenging testing ground for the comparative method, and for contact linguistics. As Zima (2000a: 3) put it, quoting an ancient Latin inscription, ex Africa semper aliquid novi.

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will enable us to formulate ways in which genetically similar due to prolonged contact, been accomplished for just a small linguistic region (e.g. Joseph, Estem 1980). Masica’s regions in Australia (Heath et al. 1996) and in north-west Amazonia been put forward in favour of prachbund (Clyffer 2002).


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