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Areal Linguistics: A Closer Scrutiny

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'It is not down in any map; true places never are.'
(Herman Melville, *Moby Dick*)

1 Introduction

The goal of this chapter is to re-examine areal linguistics and in doing so to arrive at a clearer understanding of the notion of 'linguistic area'. The conclusion reached is that it is individual historical events of diffusion that count, not the *post hoc* attempts to impose geographical order on varied conglomerations of these borrowings.

It is generally acknowledged that linguistic areas are 'notoriously messy', 'notoriously fuzzy' things (Thomason and Kaufman, 1988: 95; Tosco, 2000: 332; Heine and Kuteva, 2001: 396), and that 'what we understand about linguistic areas is depressingly meager' (Thomason, 2001: 99). I argue that the reason for this is because there is no meaningful distinction between borrowing and areal linguistics. Since we understand a great deal about borrowing, we do, as a consequence, understand linguistic areas – or better stated, we understand their limitations. The review (in Sections 2 and 3) of proposed definitions of 'linguistic area' reveals the difficulties.

2 Definitions of 'linguistic area'

A common perception is that the term 'linguistic area' is difficult to define (see Heine and Kuteva, 2001: 409). As Thomason (2001: 99) observes, 'linguistics has struggled to define the concept [linguistic area] ever since [Trubetzkoy, 1928], mainly because it isn't always easy to decide whether a particular region constitutes a linguistic area or not'. In spite of prolonged efforts to define 'linguistic area', there is no general agreement as to its

definition, and even for the most widely accepted linguistic areas, such as the Balkans, scholars do not agree wholly on which languages belong to the area, which linguistic traits characterize the area, and even its precise geographical extent. In Stolz's (2002: 260) words, 'these terms [*Sprachbund*, linguistic area, and areal type] seem to invite as many meanings and readings as there are linguistic minds to contemplate them'. I argue that too much effort has been wasted on trying to define the concept, that little progress has been made, and that it would be more productive just to investigate the facts of linguistic diffusion without the concern for defining linguistic areas.

The principal definitions that have been given of the notion 'linguistic area' (or of related and more or less synonymous terms, *Sprachbund*, diffusion area, convergence area and so on) follow, presented in chronological order. These various definitions both differ from one other and support my conclusion that linguistic areas boil down merely to a study of local linguistic borrowing and its history, and little else.[1] I list with the definitions the key elements in them that relate to the questions (discussed in Section 3) of how linguistic areas are defined.

2.1 Early efforts

Areal linguistic-like notions have long existed. There were discussions of borrowed structural traits and disputes about 'mixed languages' from the beginning of comparative linguistics (see Girard, 1747; Schleicher, 1850: 143; Ebel 1856 [cited by Kuhn, 1861: 75 and Haarmann, 1976: 20]; Müller, 1861: 90; Schuchart, 1866–68; Whitney, 1868: 197 and 1979[1875]: 119; Schmidt, 1872; Powell 1891: 216–77; Meillet, 1921[1921]: 82; 1967: 102; Bloomfield, 1933: 468; Weinreich, 1953; Vendryes, 1968: 308, 319–20). Before explicit definitions of 'linguistic area' were sought, numerous traits were identified of *the Balkan area* (Kopitar, 1829 and 1857; Schleicher, 1850; Miklosich, 1861; Sandfeld, 1902, 1912, 1930, 1934 and 1938; for others see Schaller, 1975: 37–48) and the *South Asian (or Indian) linguistic area* (Konow, 1906; Bloch, 1919, 1925, 1930 and 1934; Vendryes 1968: 305). The origins of modern areal linguistics are traced to Franz Boas's (1917, 1920, 1929) work with American Indian languages. Boas identified examples of shared structural traits which did not seem to fit the genetic classifications (see Boas, 1920: 211). He spoke of 'acculturation' and 'absorption', and raised the question of the difficulty in some instances of distinguishing what was inherited from what was diffused. Boas' 'areal-typological' approach was influential (see Campbell, 1997a: 62–6); he compared the structural traits of languages in a particular region with their neighbours to determine whether they might be due to diffusion or be inherited, representing genetic relationships. Boas's thinking influenced the Prague school (Trubetzkoy, 1939; Jakobson, 1931, 1938: 354, 1944; Darnell and Sherzer, 1971; Campbell and Mithun, 1979; Emeneau, 1956: 107).

2.2 Definitions

It has been argued that the concept of linguistic area or *Sprachbund* was first presented in Trubetzkoy (1923), as:

> It happens that several languages in a region defined in terms of geography and cultural history acquire features of a particular congruence, irrespective of whether this congruence is determined by common origin or only by a prolonged proximity in time and parallel development. We propose the term language union (*jazykovoj sojuz*) for such groups which are not based on the genetic principle. (Trubetzkoy, 1923: 116, quoted in Toman, 1995: 204)

Key elements are geographical region; and any shared features (whether from common origin or parallel development). Not stated: anything about borrowing or diffusion (though perhaps implied in 'prolonged proximity').

Trubetzkoy (1928) is better known; his 'Proposition 16' in the first International Congress of Linguists is generally cited as the origin of the concept. He spoke of the need for the notion 'language group' [*Sprachgruppe*] – a collection of languages bound to one another by a number of systematic agreements (Trubetzkoy, 1928: 18); he divided *Sprachgruppe* into two types, families of genetically related languages and *Sprachbünde*. The latter were defined as:

> Groups composed of languages which show a high degree of similarity with respect to syntax, a similarity in the principles of morphological construction, and which offer a large number of common culture words, sometimes also an outward similarity in the phonological inventories, – but which possess neither systematic sound correspondences, nor has any correspondences in the phonological make up of the morphological units nor any common basic lexical items – such languages groups we call *Sprachbünde*. (Trubetzkoy, 1928: 18)[2]

Key elements are a 'language group' with syntactic, morphological and often phonological similarities, lacking systematic sound correspondences, no common basic vocabulary. Not mentioned: borrowing, possibly inferred from 'lacking systematic sound correspondences, and no common basic vocabulary'. There is nothing especially 'areal' about this view, apart from the fact that languages that share such traits tend, by inference, to be near one another. The name 'linguistic area' in English comes from Velten's (1943) translation of *Sprachbund* (literally 'language union'), made widely known by Emeneau (1956).[3]

Trubetzkoy (1931: 233–4; 1931: 350–1), in a paper largely about dialect geography, associated phonological areal traits with isoglosses of dialect geography, but which extend beyond language boundaries into other languages. It has

become common to associate areal traits with dialect isoglosses (Jakobson, 1931, 1938; Weinreich, 1953; Jacobs, 1954; Martinet, 1956; Emeneau, 1980[1956]: 111, 1971, 1974 and 1980; Ramanujan and Masica, 1969; Katz, 1975; Masica, 1976, 1992: 111). Trubetzkoy credited Jakobson (see below) for examples and pointed out others of his own (for example, glottalized consonants in the Caucasus region shared by North and South Caucasian, Indo-European and Turkic languages, Trubetzkoy, 1931, p. 233).

Jakobson (1931) seconded Trubetzkoy's 'Proposition 16', though mentioning 'die Fragen nach gemeinsamen Erschein gungen . . . die in der Struktur benachbarter Sprachen vorkommen und nicht durch gemeinsamen Ursprung bedingt sind' (Jakobson, 1931: 234). Key elements are structural traits in common, neighbouring languages, not from a common origin.

Here, more so than in Trubetzkoy's renditions, it is clear that the structures in question are shared by 'neighbouring languages' and are not a result of a common origin. Jakobson's main example was the 'Polytonie' (tonal contrasts) of the 'Baltic *Sprachbund*' (see Schaller, 1975: 53; Koptjevskaja-Tamm, 2002: 210). As is often pointed out, the Baltic area was thus postulated on the basis of a single defining trait, a matter to which we shall return.[4]

Becker's (1948: 5) characterization of a *Sprachbund* differs from almost all others, seemingly calling for structural convergence among the languages involved:

Under a *Sprachbund* we understand a group of languages which through common fate in the same culture area and through reciprocal influence have approximated one another so strongly that in any of them roughly the same thing can be said in roughly the same way.[5] Key elements are a group of languages, in the same cultural area, mutual influence, converge to say the same thing in the same way.

Emeneau (1956) brought areal linguistics back to the attention of scholars, particularly in America, where it had largely been abandoned because of Sapir's view that grammatical traits are rarely borrowed, having gained precedence over Boas's. Emeneau spoke of 'diffusion of linguistic traits across genetic boundaries' (1956: 105). His definition is:

> This term 'linguistic area' may be defined as meaning an area which includes languages belonging to more than one family but showing traits in common which are found not to belong to the other members of (at least) one of the families. (Emeneau 1956: 124)

Key elements are: area, two or more language families, traits not found in other members of the same family.

Sherzer's (1973: 760) definition is often cited:

> A *linguistic area* is defined here as an area in which *several* linguistic traits are shared by the languages of the area and furthermore, there is

> evidence (linguistic and non-linguistic) that contact between the speakers of the languages contributed to the spread and/or retention of these traits and thereby to a certain degree of linguistic uniformity within the area. It is important to remember that languages which are unrelated or distantly related may very well and probably do disagree with regard to many traits and yet still in the same linguistic area [*sic*] according to the above definition, since they share *several* traits (which one might want to call diagnostic traits). What is significant, then, is that linguistic structure, usually impervious to influences coming from outside its own internal mechanisms, has been affected by linguistic contact.

Key elements are several linguistic traits, a geographical area, contact-induced spread of structural traits.

Katz's (1975: 16) definition is precise:

> One can speak of a *Sprachbund* if:
>
> (a) at a given time
> (b) a continuous geographical region, that
> (c) is intersected by at least one language boundary,
> (d) is encompassed by at least one isogloss.[6]

Key elements are geographical region, at least one language boundary, at least one isogloss. Note that by this definition a single trait crossing a single language boundary can be sufficient to define a linguistic area.

Schaller's (1975: 58) definition contrasts with Katz's:

> With respect to the members of a *Sprachbund*, it is concerned with at least a part of the languages, that do not belong to a single language, that are geographically neighboring and, because of mutual influence, show a series of common traits which relate the languages found in phonological, morphological or syntactic domains.

A *Sprachbund* shows at least two common traits which extend to least three languages not belonging to the same family, excluding genetically determined origin or unilateral influence in the range of definition of the *Sprachbund*.[7] Key elements are geographical neighbouring languages, not just a single family, several shared traits (phonological, morphological or syntactic) because of mutual influence; at least two common traits which extend to least three languages not belonging to the same family.

Bright and Sherzer (1978: 228) differ slightly but significantly from Sherzer (1973) in that they specify more clearly that borrowing is behind

the shared traits, and that different language families should be involved:

> The term 'linguistic area' generally refers to a geographical area in which, due to borrowing, languages of different genetic origins have come to share certain borrowed features – not only vocabulary . . . but also elements of phonological, grammatical, or syntactic structure, which are less liable to be diffused in this way.

Key elements are geographical area, languages of different families, shared borrowed traits.

In Campbell (1985: 25), I presented what I took to be the common understanding of the notion and added my own view:

> Areal linguistics, as broadly conceived, deals with the results of diffusion of structural features across linguistic boundaries. As commonly viewed, linguistic areas are characterized by a number of linguistic features shared by various languages (some of which are unrelated or are from different subgroups within a family) in a geographically contiguous area . . . linguistic diffusion and AL [areal linguistics] are to be equated and cannot profitably be separated; i.e. I will argue that there is no sharp boundary between the two, that all areal linguistic phenomena involve diffusion and all structural diffusion involving more than two languages is areal.

Key elements are structural diffusion, more than two languages; commonly held to include also a number of shared features, various not closely related languages, geographical area.

I emphasized the lack of any significant boundary between individual acts of borrowing and areal linguistics in general. Today, I would amend this definition to abandon the 'more than two languages' requirement and would emphasize more fully that any structural borrowing is areal in nature (see Campbell, 1994: 1471).

Thomason's (2001: 99) definition is:

> A linguistic area is a geographical region containing a group of three or more languages that share some structural features as a result of contact rather than as a result of accident or inheritance from a common ancestor.

Key elements are geographical area, three or more languages, shared structural features, from contact (not as a result of accident or inheritance).

Aikhenvald and Dixon (2001: 11) offer their view that:

> A linguistic area (or *Sprachbund*) is generally taken to be a geographically delimited area including languages from two or more language families,

> sharing significant traits (which are not found in languages from these families spoken outside the area). There must be a fair number of common traits and they should be reasonably distinctive.

Key elements are geographical area, different language families, fair number of shared distinctive traits.

In Campbell (2002: 729) I attempted to give a definition that would represent the field generally (but not necessarily include my own doubts):

> A linguistic area is a geographical area in which, due to language contact and borrowing, languages of a region come to share certain structural features . . . Central to a linguistic area [are] . . . structural similarities shared among languages of a geographical area (where usually some of the languages are unrelated or at least no all close relatives). It is assumed that the reason the languages of the area share these traits is because they have borrowed from one another. (See Campbell *et al.*, 1986: 530 for a similar definition.)

Key elements are geographical area, shared structural features, languages not closely related, borrowing.

For some other definitions, not appreciably different from those listed here, see Voegelin (1945, 1961); Wolff (1959); Zeps (1962); Birnbaum (1965: 12); Seidel (1965); Décsy (1973: 29); Aoki (1975); Holt and Bright (1976); Haas (1978); Hill (1978); Lehiste (1988: 59–61); Campbell (1994: 1471; 1996a; 1997b, 1997c); Matthews (1997: 351); Trask (2000: 196–7); and Ramat (2002).

3 Questions about criteria

I turn now to a number of important questions about the criteria deemed necessary, or at least useful, for establishing linguistic areas which emerge above from the survey of definitions.

3.1 Number of languages

The question of the number of languages required to constitute a linguistic area frequently comes up. The most common answer assumes that several languages are needed, and that in every case there should be three or more. Thomason (2001: 99) says, 'the reasons for requiring three or more languages is that calling two-language contact situations linguistic areas would trivialize the notion of a linguistic area, which would then include all of the world's contact situations' (see Schaller, 1975: 54, 58). However, there is no inherent linguistic, geographical or other tangible difference between a situation with only two languages which borrow from one another, and one with three or more. If there is no significant difference between borrowing in general and areal linguistics in particular, as I argue, then the

requirement that there must be three or more languages to constitute a legitimate linguistic area is superfluous. For this to make sense, it would be necessary to show that there is a significant difference between diffusion involving two languages and diffusion among three or more, but there is no such difference. The kinds of changes that take place and the mechanisms by which they happen are the same whether two, or more than two, languages are involved (see Katz, 1975: 16).

3.2 Number of language families

Some require that two or more language families be involved to define a linguistic area – see Emeneau 1956: 124; 1965: 127; 1978: 1; also Schaller, 1975: 58; van der Auwera, 1998a: 260; Tosco, 2000; Aikhenvald and Dixon, 2001: 11). However, this is at best a desideratum, not a requirement, since the Balkan Linguistic Area, universally accepted, has only Indo-European languages among its members (though some include Turkish) (see Masica, 1992: 110). Some scholars argue that at least some of the languages of an area, even if members of the same family, should not be closely related (see Campbell, 1985: 25; 1994: 1471; Matthews, 1997: 351; Stolz, 2002: 261). In any event, for most scholars, a number of structural traits borrowed across unrelated or only slightly related languages would be considered as stronger evidence of a linguistic area, though the idea of some minimum level of required linguistic diversity among the languages of a linguistic area has not really been a focus of attention. Any attempt to establish one would surely turn out to be arbitrary.[8] If we focus on the facts of linguistic diffusion instead of seeking some diagnostic minimum amount of genetic distance as being necessary for the definition of linguistic area, the question of the number of language families needed disappears.

3.3 Number of traits

A common question is, 'How many features must be shared before a linguistically diverse region can reasonably be called a linguistic area?' (Thomason, 2001: 100; see also Campbell, 2002: 732; Koptjevskaja-Tamm, 2002: 211; Stolz, 2002). Two competing answers have frequently been given: (1) one trait is enough; (2) several traits are necessary. However, again, if there is no significant cut-off between borrowing in general and areal linguistics in particular, then the requirement that there must be several shared traits to constitute a linguistic area becomes superfluous. Any attempt to impose a lower limit proves arbitrary and unjustified by anything other than terminological convenience. Let us examine more closely some views in favour of each of these positions.

3.3.1 The single-trait view

Though less common, the notion that a legitimate linguistic area might be defined on as few as one shared trait has had a number of proponents (see

Jakobson, 1931: 139; Trubetzkoy, 1931: 345; Weinreich, 1953: 378–9; Winter, 1973: 140; Katz, 1975: 16; Masica, 1976: 172; Bright and Sherzer, 1978: 236; Campbell, 1985: 29, 48; Dryer, 1989: 266; Hickey, 1999: 36; Koptjevskaja-Tamm and Wälchli, 2001: 624). As mentioned above, Jakobson (1931) relied on a single trait, 'Polytonie', to define the Baltic *Sprachbund* (see Koptjevskaja-Tamm and Wälchli, 2001: 640–6). Katz (1975: 16) also made the single-trait minimum requirement diagnostic in his definition. In connection with the argument for the sufficiency of a single trait, I proposed:

> In principle there is no meaningful way of distinguishing LAs [linguistic areas] defined on the basis of several features from those based on but a single shared trait. Nevertheless, the question can be posed, not in the form, does or does not some entity qualify as a LA?, but rather as, how strong or weak is a particular LA? (Campbell, 1985: 29)

Single-trait linguistic areas were to be considered the very weakest (see also Masica (1976: 172, 1992: 111). Stolz (2002: 262) adds to this:

> Specialists with a background in quantitative linguistics have demonstrated convincingly that, no matter how hard you try, there is simply no way to identify a universally valid statistical minimum of similarities necessary for the constitution of a linguistic area except through the absolutely arbitrary decisions of the linguists themselves.

3.3.2 The several-traits view

For many scholars, the idea that a linguistic area should exhibit a number of shared traits, 'isoglosses', was their principal and in some cases only diagnostic criterion for defining linguistic areas (see Jakobson, 1931: 139; Trubetzkoy, 1931: 345; Becker, 1948; Wagner, 1964; Birnbaum, 1965; Henderson, 1965; Sherzer, 1973, 1976; Schaller, 1975: 54; Bright and Sherzer, 1978: 233; Emeneau, 1978: 1; Sarhimaa, 1991; Aikhenvald and Dixon, 2001: 11, among others).[9] Thomason (2001: 101) argues explicitly against the sufficiency of a single trait for defining a linguistic area: 'if a contact situation is intense enough to produce one shared structural interference feature in a group of geographically close languages, it is intense enough to produce other shared features too'. But this is not really the case. Masica (1992: 111) points out that 'often a single trait appears to diffuse over a wide area, without other features necessarily being affected'. When diffusion begins within an area, it is logically possible – and probable – that some single trait will be the first to spread; until others develop, it will be the only trait shared in this way. That is, a contact situation may be precisely only intense enough to have produced (so far) a single 'structural interference feature' – that is how a linguistic area might start to develop.[10]

Thomason (2001: 101) acknowledges that the answer to the question of how many features are needed 'has to be a judgment call', and that some areas are considered stronger or weaker, based on how many features they share. However, she asserts that 'the absence of a clear dividing line between a region that is a linguistic area and a region that is not does not justify adopting the historically implausible position that one shared feature is in principle enough'. Nothwithstanding, it does not follow that anything 'historically implausible' is at stake. Rather, there is nothing historically implausible about a single borrowed trait being shared by some languages. Since there is no legitimate boundary between borrowing and areal linguistics, the nagging question of how many traits are required is answered: a single trait is sufficient, albeit any linguistic area so designated would be a very weak one.

3.4 A question of boundaries

A major question is, how does one establish the boundaries of a linguistic area – in particular, do areal isoglosses need to bundle? Opinions fall on both sides of the issue, though more often on the side of non-bundling.

Emeneau (1978: 2) at times seemed to favour bundling: 'once several features have been established as having the same boundaries, so that there is an approximation of a "bundling of isoglosses", the linguistic area can be considered to be typologically established'. Aikhenvald and Dixon (1998: 244) assert that 'the distribution of each "bundle" of areal features . . . is crucial for determining the boundaries of linguistic areas', (see Henderson, 1965: 140; Winter, 1973: 140; Haarmann 1976: 24; Masica, 1976: 6, 170, 179; Campbell, 1985: 28).

Many, however, disagree. For example, Emeneau (1965: 128) also noted that 'prima facie, one might expect that a linguistic area in the present sense might be delimited in the same way [by 'thick bundles of isoglosses']. Unfortunately, I know of no demonstration of such a bundling of isoglosses'. 'In linguistic area studies it is doubtful if there will every emerge isogloss-bundles' (Emeneau 1965: 136) (see also Trubetzkoy, 1931: 345; Jakobson, 1944: 193; Becker, 1948: 23; Emeneau 1956: 120; Henderson, 1965: 431; Ramanujan and Masica, 1969: 550; Sherzer, 1973: 132–3; Winter, 1973: 140; Katz, 1975: 12, 16; 1992: 111; Haarmann, 1976: 24; Holt and Bright, 1976; Masica, 1976: 5, 179–80; Campbell, 1985: 27–8; Wintschalek, 1993: 6–7; Dimmendaal, 2001: 387; Koptjevskaja-Tamm and Wälchli, 2001: 624, 728; Campbell, 2002: 732; Koptjevskaja-Tamm, 2002: 215; Stolz, 2002: 264).

Matisoff's (2001: 300) question, 'does not every "linguistic area" arise from an accumulation of individual cases of "localized diffusion"?', implies non-bundling (see Koptjevskaja-Tamm, 2002). Clearly, if we shift the focus to individual localized borrowing events, regardless of how they come to be distributed, the issue of isogloss bundling to define the borders of a linguistic area becomes irrelevant. Whatever the distributions of borrowed

traits, the areas they cover become clear as we unravel the history of the changes related to borrowing in the languages involved.

3.5 Core versus periphery

Many see areal linguistics as being akin to dialect geography, where often the isoglosses do not bundle at borders, but rather are more intensely concentrated around some core zone. In Thomason's (2001: 101) words:

> In the majority of cases, the boundaries are fuzzy; often there is a central group of languages that share a large proportion of the characteristic features, and scattered peripheral languages or groups that share a considerably smaller number of the features. Frequently, too, there are shared features that are found only in a small subset of the area's languages.

Thomason and Kaufman, 1988: 96–7; Tosco, 2000; Compare Dahl, 2001: 1458. Often, several isoglosses radiate outwards from a centre of influence, resulting in a pattern of more shared traits at the core, with fewer shared features as one moves towards the periphery; some extend further from the core, others extend for less of a distance. In this vein, Becker (1948: 23) spoke of 'Kernsprachen' (core, nuclear languages) and 'Randsprachen' (peripheral languages) in a *Sprachbund*. As Thomason (2001: 104) says:

> it must be acknowledged that deciding where the boundaries are can be a difficult task, that some cases will be truly indeterminate, and that . . . an ancient linguistic area can be overlaid by a more recently emerged linguistic area with different boundaries . . . overlapping and interlocking isoglosses.

It has not gone unnoticed that this core–periphery pattern (and the lack of isogloss bundling generally) creates problems with attempts to define linguistic areas. Dahl sees in this core–periphery pattern a major challenge to areal linguistics:

> An area with the typical center–periphery structure will often exhibit the greatest genetic diversity in the peripheral parts . . . This means that an areal sample that aims at genetic representativeness will over-represent those parts and under-represents the more homogeneous center. It also means that minor adjustments in the way the borders of an area are defined may have rather dramatic consequences for such a sample . . . *This again raises the question about the reality of linguistic areas* (Dahl, 2001: 1463) (Emphasis added)

The 'core' and fragmentary periphery are artefacts of the history of borrowings, nothing more. Thomason's (2001: 102) take on this appears to support this conclusion:

> This variation [fuzzy boundaries, non-bundling] is hardly surprising, since the way a linguistic area arises is through contact-induced changes that occur over a long period of time and spread widely through the region – but always from language to language in a series of events, not in some single mystical area-wide process that affects many languages at once.

With the focus on the history of diffusion and not on defining the boundaries, there ceases to be a problem. This lends support to my conclusion that defining the areas is of little importance, and it is the history of diffusion that counts. Indeed, it is the individual borrowing events involving specific individual instances of language contact that produce these isogloss patternings, and the investigation of the history of these individual borrowings should be our primary concern. As Masica (1992: 110) says, 'the real locus of language "contact" is the mind of the bilingual individual', echoed also in Giannini and Scaglione's (2002: 152) words, 'the process . . . is . . . borrowing, and it is the bilingual speaker who is the material agent in this process.'

In this context, the question of numbers arises again. Consider a situation in which two particular languages in a linguistic area share significantly more traits between the two of them than do any other languages of the area. Do these two, then, constitute the 'core' of some particular area? Or, is this to be considered just a case of local borrowing that is not 'areal', under the assumption that two languages alone is not enough to constitute an area, and that there must be three or more? Put differently, if all borrowings, hence all areal phenomena, ultimately come down to individual local borrowings, how could it be possible to rule out a situation where only two languages are engaged in borrowing? And, if all known linguistic areas are just the aftermath and build-up of instances of such individual borrowings among pairs of languages, why should we attempt to adorn the concept of 'linguistic area' with anything beyond a simple accumulation of individual borrowings that result from their own individual contingent histories, a history of borrowings? In this view, a core where many traits affect only two languages would be as 'areal' as a core in which more languages were involved.

3.6 Different kinds of 'linguistic area'?

It is generally recognized that what have been called linguistic areas include things that have widely divergent characters and historical backgrounds, depending on the social, cultural, political, geographical, attitudinal and other factors that correlate with diffusion of linguistic features

in different regions (see Kuteva, 1998: 308–9; Aikhenvald and Dixon, 2001: 11, 13; Dahl, 2001: 1458). As Thomason (2001: 104) explains, '[linguistic areas] arise in any of several ways – through social networks established by such interactions as trade and exogamy, through the shift by indigenous peoples in a region to the language(s) of invaders, through repeated instances of movement by small groups to different places within the area'. One finds mentioned in the literature such different sorts of linguistic areas as: incipient ones, only beginning to form and with as yet few shared traits; moribund and decaying ones, where as a result of many changes after the area was actively formed, fewer traits are currently recognizable among the languages; layered ones (with new layers and old layers), and overlapping ones, where different areas formed on top of one another or overlapping one another at different times for different reasons; multilateral versus unilateral areas;[11] areas resulting from rapid conquest, to population spread and migration (traits moving with movement of speakers), others through home-grown, stay-in-place contact (movement of traits but not of peoples); disrupted areas with 'latecomers, earlier drop-outs, and temporary passers-by' (Stolz, 2002: 265) and so on.[12]

'In short, "linguistic area" is not a uniform phenomenon, either socially or linguistically' (Thomason, 2001: 115). This array of different kinds of linguistic area raises questions about whether the notion of 'linguistic area' is justified. Do all these different 'objects' legitimately qualify as 'linguistic areas', given their very different natures and composition, and given the very different circumstances of their formation (and decay)? The notion of a 'linguistic area' offers little on which these different sorts of linguistic areas can be united, other than the fact that they all involve borrowing in some way, but borrowings of different sorts, for different reasons, in different settings and at different times. Thus Dahl asks:

> In the end, we are led to the following more far-going question about the notion of area: to what extent do areas . . . have a reality of their own and to what extent are they just convenient ways of summarizing certain phenomena? At the most basic level, linguistic contact relationships are binary: one language influences another. An area is then simply the sum of many such binary relationships. (Dahl, 2001: 1458)

A linguistic area, to the extent that it may have a legitimate existence at all, is merely the sum of borrowings in individual languages in contact situations. If we abandon the search for an adequate definition of this concept and focus rather on understanding borrowings, those contingent historical events, the difficulty of determining what qualifies as a legitimate linguistic area ceases to be a problem.

3.7 Is diachronic evidence required?

There is a distinction between what I called 'historicist' and 'circumstantialist' approaches to areal linguistics (Campbell, 1985, 1997a: 330–1; Campbell *et al.*, 1986). The historicists call for historical evidence that the traits used to define linguistic areas really were borrowed, while circumstantialists tend to amass a number of shared traits among the languages of a region and allow the circumstances to imply the probability of diffusion, but do not require proof of this. A number of scholars hold that only linguistic areas supported by a significant amount of historical evidence documenting the diffusion of the traits in question are fully legitimate (see Dahl, 2001: 1457; Thomason, 2001: 102–3; several chapters in Ramat and Stolz, 2002). It will be noticed, however, that such a requirement, of actual historical evidence of diffusion, highlights the lack of distinction between areal linguistics and borrowing in general. It supports my argument that structural borrowings deserve attention first and foremost, and that linguistic areas are after-the-fact constructs based on the residue and accumulation of borrowed traits, regardless of how and when they came to be shared among the languages involved.

3.8 What about 'geography'?

Is 'geography' required in areal linguistics? It would seem that the answer should obviously be 'yes', but in fact not everyone agrees – the answer to the question is more complicated than it seems.

3.8.1 'Geography' and 'linguistic areas'

It is generally assumed that a linguistic area must be 'a geographically delimited area' (Aikhenvald and Dixon, 2001: 11), though some definitions seem to concentrate only on the sharing of features and ignore region. Thomason (2001: 99) explains that 'the reason for specifying a single geographical region [in the definition of 'linguistic area'] is obvious: no direct contact among speakers, no linguistic area'. Nevertheless, language contact does not inescapably require geography. As Dahl (2001: 1460) points out, 'the whole notion of "areal phenomena" is built on the convenient fiction that each language has a specific location in space, that no more than one language is spoken in each place, and that language contact takes place between adjacent languages. However, language contacts typically occur in densely populated places where speakers of many languages live together and bi- or multilingualism is common. In addition, many languages have a widely scattered distribution.'

Dahl (2001: 1458) argues against the 'many current definitions which make [geographical] contiguity a necessary condition'. Some contact is not infact 'geographical' but could be said to be vertical, as in the well-known instances of influence from older, 'dead' ancestor languages (as in

the case of the significant impact of Latin on French and Spanish, or of Sanskrit on modern Indic languages). Contact can be vertical, or at least not geographical, in another sense also, where two or more languages are spoken in precisely the same location. Thomason's (2001: 1) definition suggests this: 'language contact is the use of more than one language in *the same place* at the same time' (emphasis added). That is, by implication, that language contact does not necessarily involve languages in different but adjacent regions; both languages can occupy the same location.[13] As some see it, the primary venue for the transfer of features from one language to another is inside a single head – that of the bilingual – making geography unimportant.

On the other hand, some language contact, even when geography is involved, is not limited just to adjacent neighbours, but can be long-distance, through trade and travel, conquest and migration.[14] For example, we can point to the well-known pattern of the spread of innovations through long-distance contact and linguistic diffusion, first among major cities at some distance from one another, with the innovations reaching the rural areas later, and less distant from the urban elite who changed first – the spread of uvular 'r' in several European languages is a ready example of this pattern (see Trudgill, 1983: 56–9). There are also cases, such as the influence of Latin on the structure of various European languages, English in particular, with which it shared no geographical boundary (compare the influence on Sicilian, not from neighbouring Italian, but from languages further afield).

Stolz (2002: 265–6) highlights the geography problem in the emigration of speech communities:

> The emigrants take their language and with it the areally defined features to a place that is located outside the original linguistic area. Does this mean that the language is no longer a member of the linguistic area/*Sprachbund*? Or rather does this mean that the linguistic area/*Sprachbund* automatically expands through migration and may include languages which strictly speaking, are not co-territorial with the rest of the members of the linguistics area? If so, the notion of area would lose its geographical implications because discontinuous, non-contiguous constellations would count as areas as well.

The considerations in this section indicate that geographical proximity is not absolutely necessary for borrowing of structural traits across languages. If the limiting case for having a linguistic area is structural borrowing across language boundaries, then in some instances it may well be that such borrowing, while not common, takes place among non-adjacent or even distant languages. What is crucial is the contact, not the geography.

3.8.2 Geographical (non-)determinism

The relevance of the preceding discussion about geography and borrowing becomes more apparent when considered in light of the claim made here that it is the diffusion that is of prime importance, and that the geographical aspect of putative 'linguistic areas' is derivative. The shared linguistic traits are not brought into existence by, nor somehow explained by, the geographical region, in spite of the fact that the notion of 'linguistic area' is often presented, at least implicitly, as some entity where the geography is prime and the linguistic traits themselves are just reflections of some sort of vague geographical determinism. There is no geographical determinism; the linguistic borrowings are prime, and the geographical areas are only a reflection of these, with no significant causal force of their own. Koptjevskaja-Tamm's (2002: 209) reading of the Baltic linguistic area leads her essentially to the same conclusion:

> Intensive micro-contacts superimposed on each other sometimes create the impression of an overall macro-contact among the languages in an area, which has not necessarily been there. Therefore the notion of *Sprachbund* is not satisfactory for describing the linguistic situation in the CB [Circum-Baltic] area.

I do not wish to imply that the geographical patterns that can arise as by-products of the borrowings, those contingent historical events, cannot contribute to historical understanding – they can and do. However, it is necessary to combat the notion that the geography is prime and the borrowings are in some way secondary to and determined by the geography. There is nothing about the geography itself that forces the linguistic behaviour, that in some way causes languages of a region to become more alike. Rather, there are simply a number of individual events of diffusion involving in the main local dyads of languages (in fact, of speakers of the languages); some traits once borrowed may then be borrowed further in other dyadic interactions involving other languages, in this way giving the trait a larger geographic trajectory. Koptjevskaja-Tamm's (2002: 219) finding for the Circum-Baltic languages is true generally: 'Convergence that comprises more than two or three languages, it seems, is always the result of the overlapping and superposition of different language contacts'; 'intensive micro-contacts superimposed on each other sometimes create an impression of an overall macro-contact among the language, which has not necessarily been there'.

3.9 Other questions

There are a number of other issues involved in attempts to define linguistic areas, which come up with some frequency in the literature, but which I do not discuss here, in the interest of space, though they deserve mention. Some follow (see Stolz, 2002: 263–4 for others).

(1) *The nature of the areal traits* For traits to qualify as areal or to carry much weight in defining an area it has been proposed that they should be 'reasonably distinctive', marked, and not too natural, unique or unusual in the region, low on hierarchies of borrowability (that is, hard to borrow), or typologically not commonplace.

(2) *Trait weights* Some borrowed traits are deemed to carry more weight for defining a linguistic area than others (in particular typologically complex features, traits that are more difficult to borrow), and various scales, hierarchies and rankings have been proposed to account for the different roles that different kinds of diffused traits are assumed to play. Weight, borrowability and some notion of typological compatibility between borrowed traits and the existing structures of the borrowing language are often mentioned. (For a discussion, see Katz, 1975; Heath, 1978: 104–7; Campbell, 1985, 1996a, 1996b, 2002: 732; Campbell *et al.*, 1986: 535–6; van der Auwera, 1998a; Aikhenvald and Dixon, 2001; Curnow, 2001; Haig, 2001: 218–22; Giannini and Scaglione, 2002; Stolz, 2002: 264–5 and so on). In particular, the fact that different traits count differently for defining a linguistic area because of their different weights/ranks makes isopleth maps (such as van der Auwera's (1998a)) less useful and less revealing. The isopleth marked on such maps represents languages sharing the same number of traits, but this is misleading. It appears to give as much areal credit to languages sharing features that diffuse easily as it does to languages sharing traits that are much more difficult to borrow, so long as the numbers (though not the weights) are relatively similar.

(3) *Age* The matter of the time depth involved has impinged on some scholars' notions of how linguistic areas are defined (see Aikhenvald and Dixon 2001: 12). Some believe considerable time is required for a linguistic area to emerge – on the order of millennia – while for others it may be as little as a couple of hundred years (see Haspelmath, 1998; Aikhenvald and Dixon, 2001: 9–10, 13; Thomason, 2001: 102; Watkins, 2001: 49, 55).

(4) *Parallel innovation, accidental similarity* How can traits that are the result of independent but parallel development be distinguished from traits that involve areal diffusion? How can we distinguish traits found in an area that are only accidentally similar from those that have diffused? (Several of the chapters in Ramat and Stolz (2002), for example, grapple with these questions.)

3.10 Conclusion on definitions

This survey leads to a similar conclusion to that made by Stolz (2002: 259) – that 'the search for clearcut definitions [of '*Sprachbund*, linguistics area and areal type'] has been largely futile and will probably never come to a really

satisfying conclusion'.[15] Every 'linguistic area', to the extent that the notion has any meaning at all, arises from an accumulation of individual cases of 'localized diffusion'; it is the investigation of these specific instances of diffusion, and not the pursuit of defining properties for linguistic areas, that will increase our understanding and will explain the historical facts. With the focus rather on specific instances of borrowing, many of the unresolved issues and indeterminacies that have dogged areal linguistics from the outset cease to be relevant questions.

4 Areal excesses and the attack on family trees

While it is not possible to deal with them in detail here, it should be mentioned that areal linguistic notions figure in some recent proposals that see themselves as going beyond basic historical linguistic methods (see Nichols, 1992, 1995, 1997, 1998; Aikhenvald and Dixon, 2001; Dixon, 1997). I have argued that the use of areal-linguistic-like concepts in these works are mistaken and misleading (for details, see Campbell 2003, forthcoming). However, one aspect of this work does bear closer examination here: the recent attacks on the concept of the family tree in linguistics. Some scholars have recently taken a sceptical view of the validity of family tree diagrams, stemming from beliefs about the degree of convergence or confounding possible in language contact situations. It is important to clarify this debate – the scepticism towards family trees is misplaced.

Jakobson (1938) offered a solution to the old debate about the possibility of multiple origins for a single language – that is, to the question about the utility of the family tree model in situations of areal diffusion: 'La similitude de structure ne s'oppose donc pas, mais se superpose a la "parenté originaire" des langues' (Jakobson, 1938: 353). He called for adequate description of shared traits without premature generalizations about whether they owe their explanation to a genetic relationship, a mixture or to diffusion (Jakobson, 1938: 365). This remains sound advice. Mainstream historical linguists realize that it is not possible to understand diffusion fully without knowing the genetic affiliation of the languages involved, and vice versa, it is not possible to account fully for what is inherited without proper attention to what is diffused. That is, it is not two distinct, opposed and antagonistic points of view that are involved, but rather both are needed and they work in concert: 'both the comparative method and areal linguistics are historical disciplines – twin faces of diachronic linguistics' (Hamp, 1977: 27). Both are necessary if we are to answer the question, 'What happened?', the historical linguist's goal.

The following are some citations that question the family tree model and favour areal linguistic alternatives:

> Areal linguistics was originally inspired by the insufficiency of genetic relationships as an explanation for similarities between languages, in particular, by the recognition of grammatical and phonological similarities which were due to language contact. (Dahl, 2001: 1457)

> The original motivation of both [areal linguistics and language typology] was the insufficiency of the genetic Stammbaum model for the study of relationships among languages. (Dahl, 2001: 1456)

> A family-tree-like diagram does not adequately demonstrate the many kinds of historical and current relationships between [among] languages. (Aikhenvald and Dixon, 2001: 6)

There are a number of misconceptions in these citations. The goal of the historical linguist is to determine the history of the languages involved, whether that has to do with inheritance, diffusion or a combination of both. Indeed, both the inherited and the diffused are necessary at the same time. The matter of the burden of proof requires this. To test any hypothesis of genetic inheritance, it is necessary to demonstrate that it fits the facts better than alternative possible explanations, borrowing being principal among alternatives (though accident, universals and others must also be considered). Similarly, for any hypothesis of borrowing, it is necessary to demonstrate that other possible explanations do not provide a better answer, and the possibility of inheritance from a common ancestor is crucial among those that must be eliminated for the hypothesis of diffusion to stand. That is, it is not a question of driving the genetic explanations as far as possible and then (and only then) turning to areal diffusion as a last resort. Rather, it is a matter of seeking the whole history and testing any hypothesis against other possible explanations. In fact, many of the errors and excesses seen today in both proposals of distant genetic relationships and in proposals of diffusion stem from not considering other possible explanations sufficiently before reaching conclusions in particular cases.

Some, in the zeal for areal explanations as presumed challenges to the comparative method, call for alternative models and methods:

> A main thesis of this essay [Dixon, 1997] is that the family tree model, while appropriate and useful in many circumstances, is not applicable everywhere and cannot explain every type of relationship between languages. We need a more inclusive model, which integrates together the ideas of the family tree and of diffusion area. (Dixon, 1997: 28)

> To reconstruct the history of a language adequately, a model is needed which is significantly more sophisticated than the family tree based on

> the use of the comparative method. It needs to incorporate the diffusion and layering process as well as other language-contact phenomena such as convergence, metatypy and hybridization. The desideratum is a synthesis of all the processes that affect language formation and development. (Chappell, 2001: 354)

Though these citations suggest otherwise, mainstream historical linguists agree that the family tree is not everything and does not explain all the kinds of historical relationships that can affect languages. They agree – insist – that attention must be paid to diffusion. Historical linguistics has never been limited to only the family tree – borrowing, wave theory, and later areal linguistics, are all taken into account (see Garrett, 1999). Moreover, a consequence of Dixon's (1997: 11) 'assumption 4', that 'in the normal course of linguistic evolution, each language has a single parent', is that the family tree model is always relevant, regardless of whether the application of methods to determine the family tree in given instances is complicated by changes – for example, of an areal linguistic nature – that require the use of other historical linguistic techniques for a full understanding. Therefore, most historical linguists would say that we do not need the more inclusive integrative model that Dixon, Aikhenvald and Chappell have called for – we already have one. As Watkins explains, 'the resilience and the power of the comparative method lies in its sensitivity to similarity due both to genetic filiation and areal diffusion alike. Both are historical models, and the goal of comparison is history'. Hübschmann (1875) demonstrated this 'when he proved that Armenian was a separate branch of Indo-European, and not a dialect of Iranian as previously thought' (Watkins, 2001: 59). Armenian exhibits a huge influence from Iranian, but it was the application of the comparative method which revealed this as diffusion and not inheritance (see Campbell and Poser, forthcoming, for details).

Scholars claiming that diffusion has called the comparative method into question seem to have lost sight of this. For example, Aikhenvald and Dixon (2001: 4, 6) claim the family tree is merely a bad 'metaphor' that others assume to be a reality:

> The family-tree metaphor [developed for Indo-European] has been taken over for other parts of the world in stark form, often as the sole model for relationships between [among] languages . . . Rather than asking whether a form of family tree is appropriate to the language situation in some newly studied region, it has often been simply *assumed* that it is. What began as a metaphor has been ascribed reality, and has acted to constrain enquiry along narrow lines. This can lead at best to a partial and at worst to a mistaken statement of language relationships. (Aikhenvald and Dixon, 2001: 6–7)

Aikhenvald and Dixon appear to hold the view that traditional historical linguists believe that a mere diagram, used to reflect linguistic lines of descent, is the whole story, and they do not address the rest. This rhetoric about 'metaphor' is misleading, as there are identifiable historical facts – the objective reality that in language families languages can indeed be related to one another as a result of descent from a common ancestor – this is not merely a metaphor. But this was never considered to be the whole story. As Sebeok (1950: 101) makes clear, if some scholars limit their vision to only what is inherited, too bad for them, but this is not an accurate characterization of what historical linguists generally do, nor of the history of the field, as the Armenian case and many others show. The diagram, which attempts to depict the family tree, is just one part of the larger story, and the handbooks on the history of languages always give attention to borrowing.

Family trees are not the targets, not the bad guys. It is never a question of diffusion or convergence versus the family tree; rather it is always a question of both. We want to answer the question, 'What happened?', and for that we need both inheritance and diffusion.

True, there are cases where it is difficult or even impossible to figure out whether shared traits are a result of inheritance, diffusion, independent parallel development or accident. The difficulty or impossibility of distinguishing what is inherited from what is diffused in some cases is readily acknowledged by mainstream historical linguists; however, this is routinely cited by those who wish to place the comparative method or genetic relationships among languages in a bad light (see Aikhenvald, 2001: 190–1; Aikhenvald and Dixon, 2001: 1; Chappell, 2001: 335, 353–4; Dahl, 2001: 1456; LaPolla, 2001). All retrospective sciences are faced with the same problem: we do our best to recover the past from the evidence on hand, which sometimes is insufficiently well preserved to allow clear answers. However, fortunately in linguistics our methods have proved successful repeatedly in distinguishing specific instances of inheritance from borrowing. Because the methods have been successful in so many cases, we do not abandon them just because the extant evidence in some specific instance is insufficient, just as we do not conclude that an vehicle can never take us anywhere just because on one occasion the petrol ran out.

It is definitely not a question of exclusive domains – areal versus genetic – but rather of both working in concert to determine the full history.

5 Conclusions

Some of the conclusions in this chapter may appear dreary: (1) we should abandon the search for a definitive definition of 'linguistic area'; (2) areal linguistics is not distinct from borrowing/diffusion in general; and (3) the concept 'linguistic area' is not significant in itself. Instead of pursuing definitions of linguistic areas, we should attempt to account for the history of

individual borrowings and diffusion, together with language change in general, in order to answer the question, 'What happened?' Still, I believe the overall conclusion is a positive one. There is something liberating and satisfying about being able to abandon the fruitless search for an acceptable definition of 'linguistic area' and the attempts to establish specific linguistic areas around the world, and to be able to get on with the task of trying to answer the question, 'What happened?' If we succeed in determining what changes have taken place, and how, when and why they took place, we will have succeeded in providing all the information underlying traditional notions of linguistic areas. We will know which changes are a result of borrowing and which to inheritance, and will know their distribution across languages. The geographical patterning to instances of diffusion will be a natural consequence of this fuller historical account, read directly off the accumulation of history changes in the languages involved.

Notes

1 The terms 'language contact', 'borrowing', 'diffusion', 'interference' and 'contact-induced change' are widely used and generally understood, though some confusion occasionally occurs, and finer-grained definitions have at times been offered (see Thomason and Kaufman, 1988, Thomason, 2001). I use 'borrowing' to mean broadly anything that was not formerly in a language but comes to be there because of contact with another language. I use 'interference' to mean things that were already native in the language but have come to be modified in some way through contact with another language. I use 'diffusion' as a cover term for the borrowing of any sort of linguistic feature. While it is useful, I do not employ Thomason's (2001: 129) distinction between shift-induced interference with imperfect learning and native speakers borrowing from another language. In a language contact situation, even within a linguistic area, some speakers can be involved in shifting languages (possibly with imperfect learning) while at the same time other speakers are borrowing, as native speakers; both can influence jointly change in the languages involved. Since in many situations it is, on the one hand, difficult to separate out the effects of the two, and on the other, the necessary information for making the distinction is often not available, I do not make use of the distinction here. Thomason (2001: 129) sees the 'distinction in their typical linguistic results', which she believes to be 'less transferred vocabulary and more structure in shift-induced interference vs. more transferred vocabulary and less structure in borrowing'. In many linguistic areas, of course, there will be a certain amount of both. Thus, for example, I do not see, as Thomason (2001: 111) does, that the Ethiopian highlands linguistic area is solely 'a result of shift-induced interference from Cushitic speakers who adopted the languages of the more recently arrived Semitic speakers'. Native speakers of Semitic languages probably also accepted the incoming traits that owe their origins to Cushitic languages – that is, acts of borrowing. Thomason (2001: 130) acknowledges that the dichotomy between these two does not fit mechanisms of change very precisely.

2 My translation; original: 'Gruppen, bestehend aus Sprachen, die eine grosse Ähnlichkeit in syntaktischer Hinsicht, eine Ähnlichkeit in der Grundsätzen des morphologischen Baus aufweisen, und eine grosse Anzahl gemeinsamer Kulturwörter

bieten, manchmal auch äussere Ähnlichkeit im Bestande der Lautsysteme, – dabei aber keine systematische Lautentsprechungen, keine Übereinstimmung in der lautlichen Gestalt der morphologischen Elemente und keine gemeinsamen Elementarwörter besitzen, – solche Sprachgruppen nennen wir Sprachbünde' (Trubetzkoy, 1928: 18). (See also Stolz, 2002: 260.)

3 Emeneau (1956: 124) mentions his use of Velten's translation, but points to other sources which brought it to his attention (for example, Voegelin, 1945; see Sebeok, 1950: 101).

4 Jakobson (1938: 353) mainly just repeated Trubetzkoy's Proposition 16: 'Les "alliance" (Sprachbünde) possédant des resemblances remarquables dans leur structure syntaxique, morphologique ou phonologoque et les "familles" (Sprachfamilien) caractérisées avant tout par un fond commun de morphemes grammaticaux et de mot usuels.'

5 Unter einem *Sprachbund* verstehen wir eine Gruppe von Sprachen, die durch gemeinsame Schicksale im gleichen Kulturraum und durch wechselseitige Beeinflussung einander so stark angenähert wurden, daß man in jeder von ihnen ungefähr das gleiche auf ungefähr die gleiche Art sagen kann.

6 Von einem *Sprachbund* kann man sprechen, wenn:

(a) zu einer gegebenen Zeit
(b) ein zusammenhängendes geographisches Gebiet, das
(c) von mindestens einer Sprachgrenze durchzogen ist,
(d) von mindenstens einer Isoglosse umspannt wird.

7 Bei den Mitgliedern eines Sprachbundes handelt es sich zumindest bei einem Teil der Sprachen um solche, die nicht zu einer Familie gehören, die geographisch benachbart sind und auf grund gegenseitiger Beeinflussung eine Reihe von gemeinsamen Merkmalen aufweisen, die sich auf den lautlichen, morphologischen oder syntaktischen Bereich der betreffenden Sprachen beziehen. Ein *Sprachbund* weist mindestens zwei gemeinsame Merkmale auf, die sich auf mindestens drei nicht zur gleichen Familie gehörende Sprachen erstrecken, um gennetisch bedingten Ursprung oder einseitige Beeinflussung im Definitionsbereich des Sprachbundes auszuschließen.

8 Alan Dench points out (personal communication) that perhaps to a certain degree this 'requirement' is simply an artefact of the discovery procedure. Since it is much easier to discover borrowing against a background of typological or genetic difference than where languages are more alike, the presence of distinct language families may simply make it easier to recognize diffusion, and thus easier to defend, thereby giving the genetic distance an assumed special importance in studies of linguistic areas.

9 As Stolz (2002: 261) points out, some have argued for 'two' as the appropriate minimum number of shared traits to define a linguistic area (see Haarmann, 1976: 23; Schaller, 1975: 58; Wintschalek, 1993: 6).

10 A single-trait area may also enter the picture via another route. As Thomason (2001: 101) notes, it is possible that in a former linguistic area evidence of earlier contact-induced changes could have eroded, leaving only one still visible.

11 Directionality is sometimes made an issue in defining linguistic areas (see Stolz, 2002: 264). It has to do, for example, with whether the diffusion is largely unidirectional, say from some dominant language to many of its neighbours, or multilateral, crossing several language boundaries, with uncertain origins (see Thomason and

Kaufman, 1988: 96; Aikhenvald and Dixon, 2001: 11). The distinction, however, as pointed out by Matisoff (2001: 300) becomes 'quite artificial' in many contact situations (see also arguments against this in Dahl, 2001; Stolz, 2002).

12 There are several other proposed areal notions that I do not take up here for lack of time; these include, for example, Bellwood's (2001) friction zones, and upwelling or starburst zones; Renfrew's (2000: 27) mosaic-zones; contact superposition zones (Koptjevskaja-Tamm and Wälchli, 2001: 624–6, etc.; Koptjevskaja-Tamm, 2002; see Campbell (2003) for a discussion of some of these).

13 Matisoff (2001: 300), in a separate vein, talks of different but what we might call vertical linguistic areas in the same region characterized by social differences:

> I would even claim that South-East Asia comprises two linguistic areas at once: one 'vertical', distinguishing the languages of the hard-scrabble minority populations of the hills from those of the major languages of the plains (one important difference is the lack of elaborate honorific language or status-based pronominal systems in the languages of the humble hill-dwellers); and one 'horizontal', cutting across the entire region.

14 Here, I follow up what I argued in Campbell (1985: 25): 'linguistic diffusion and AL [areal linguistics] are to be equated and cannot profitably be separated; i.e. I will argue that there is no sharp boundary between the two'. However, I now see this lack of distinction a greater challenge to the notion of linguistic area generally. In recent years some others have also taken similar stances which either challenge the concept 'linguistic area' or advocate abandoning it (see Dahl, 2001; Koptjevskaja-Tamm, 2002; Koptjevskaja-Tamm and Wälchli, 2001; Stolz, 2002: 266; Reiter, 1991; van der Auwera, 1998b).

References

Aikhenvald, Alexandra Y. (2001) 'Areal Diffusion, Genetic Inheritance, and Problems of Subgrouping: A North Arawak Case Study', in Alexandra Y. Aikhenvald and R. M. W. Dixon (eds), *Areal Diffusion and Genetic Inheritance: Problems in Comparative Linguistics* (Oxford: Oxford University Press), pp. 167–94.

Aikhenvald, Alexandra Y. and R. M. W. Dixon (1998) 'Evidentials and Areal Typology: A Case Study from Amazonia', *Language Sciences*, vol. 20, pp. 241–57.

Aikhenvald, Alexandra Y. and R. M. W. Dixon (2001) 'Introduction', in Alexandra Y. Aikhenvald and R. M. W. Dixon (eds), *Areal Diffusion and Genetic Inheritance: Problems in Comparative Linguistics* (Oxford: Oxford University Press), pp. 1–26.

Aoki, Haruo (1975) 'East Plateau Linguistic Diffusion Area', *International Journal of American Linguistics*, vol. 41, pp. 183–99.

Becker, Henrick (1948) *Der Sprachbund*. Leipzig: Humboldt Bücherei Gerhard Mindt.

Bellwood, Peter (2001) 'Early Agriculturalist Population Diasporas? Farming, Languages and Genes', *Annual Review of Anthropology*, vol. 30, pp. 181–207.

Birnbaum, Henrik (1965) 'Balkanslawisch Und Südslawisch', *Zeitschrift für Balkanologie*, vol. 3, pp. 13–63.

Bloch, Jules (1919) 'La formation de la langue marathe', *Bibliothèque de l'École des Haute Études*. Sciences Historiques et Philologiques, 215 (Paris: Champion).

Bloch, Jules (1925) 'Sanskrit et dravidien', *Bulltetin de la Société Linguistique de Paris*, vol. 25, pp. 1–21.

Bloch, Jules (1930) 'Some Problems of Indo-Aryan Philology', *Bulletin of the School of Oriental Studies*, vol. 5, pp. 719–56.

Bloch, Jules (1934) *L'Indo-aryen du Véda aux temps modernes*; revised English trans. by Alfred Master (1965) *Indo-Aryan from the Vedas to Modern Times* (Paris: Maissonneuve).

Bloomfield, Leonard (1933) *Language* (New York: Holt, Rinehart & Winston).

Boas, Franz (1917) Introduction. *International Journal of American Linguistics*. (Reprinted: Franz Boas (1940) *Race, Language, and Culture* (New York: The Free Press), pp. 199–210.)

Boas, Franz (1920) 'The Classification of American Languages', *American Anthropologist* vol. 22, pp. 367–76. (Reprinted: Franz Boas (1940) *Race, Language, and Culture* (New York: The Free Press), pp. 211–8.)

Boas, Franz (1929) 'The Classification of American Indian Languages', *Language*, vol. 5, pp. 1–7.

Bright, William and Joel Sherzer (1978) 'Areal Features in North American Indian Languages', *Variation and Change in Language: Essays by William Bright* (Stanford: Stanford University Press), pp. 228–68.

Campbell, Lyle (1985) 'Areal Linguistics and Its Implications for Historical Linguistic Theory', in Jacek Fisiak (ed.), *Proceedings of the Sixth International Conference of Historical Linguistics* (Amsterdam: John Benjamins), pp. 25–56.

Campbell, Lyle (1992) 'The Meso-American Language Area', in William Bright and Bernard Comrie (eds), *International Encyclopedia of Linguistics*, vol. 2 (Oxford: Oxford University Press), pp. 415–17.

Campbell, Lyle (1994) 'Grammar: Typological and Areal Issues', in R. E. Asher and J. M. Y. Simpson *Encyclopedia of Language and Linguistics*, vol. 3 (London: Pergamon Press), pp. 1471–4.

Campbell, Lyle (1996a) 'Typological and Areal Issues', in Keith Brown and Jim Miller (eds), *Concise Encyclopedia of Syntactic Theories* (Oxford: Pergamon Press), pp. 339–43. [Reprint of 1994, in *Encyclopedia of language and linguistics*].

Campbell, Lyle (1996b) 'Phonetics and Phonology', in Hans Goebl, Peter H. Nelde, Zdenek Stary, and Wolgang Wölck (eds), *Contact Linguistics*, International Handbook of Contemporary Research, 14 (Berlin: Walter de Gruyter), pp. 98–103.

Campbell, Lyle (1997a) *American Indian Languages: The Historical Linguistics of Native America*. (Oxford: Oxford University Press).

Campbell, Lyle (1997b) 'Typological and Areal Issues in Reconstruction', in Jacek Fisiak (ed.), *Linguistic Reconstruction and Typology* (Berlin: Mouton de Gruyter), pp. 49–72.

Campbell, Lyle (1997c) 'Genetic Classification, Typology, Areal Linguistics, Language Endangerment, and Languages of the North Pacific Rim', in Osahito Miyaoka and Minoru Oshima (eds), *Languages of the North Pacific Rim*, vol. 2 (Kyoto: Kyoto University), pp. 179–242.

Campbell, Lyle (1998) *Historical Linguistics: An Introduction* (Edinburgh: Edinburgh University Press). (1999 American rights edition, Cambridge, Mass.: MIT Press).

Campbell, Lyle (2001) 'Beyond the Comparative Method?', in Barry Blake and Kate Burridge (eds), *Historical Linguistics 2001* (Amsterdam: John Benjamins), pp. 33–57

Campbell, Lyle (2002) 'Areal Linguistics', in Bernard Comrie (ed.), *International Encyclopedia of Social and Behavioral Sciences* (Oxford: Pergamon), pp. 729–33.

Campbell, Lyle (2003) 'What Drives Linguistic Diversity?', in Colin Renfrew and Peter Bellwood (eds), *Language-Farming Dispersals*. (Cambridge: McDonald Institute for Archaeological Research).

Campbell, Lyle, Terrence Kaufman, and Thomas Smith-Stark (1986). 'Mesoamerica as a Linguistic Area', *Language*, vol. 62, pp. 530–70.

Campbell, Lyle and Marianne Mithun (1979) 'North American Indian Historical Linguistics in Current Perspective', in L. Campbell and Marianne Mithun (eds), *The Languages of Native America: An Historical and Comparative Assessment* (Austin, TX: University of Texas Press), pp. 3–69.

Campbell, Lyle and William Poser (forthcoming) *How to Show That Languages Are Related*.

Chappell, Hilary (2001) 'Language Contact and Areal Diffusion in Sinitic Languages', in Alexandra Y. Aikhenvald and R. M. W. Dixon (eds), *Areal Diffusion and Genetic Inheritance: Problems in Comparative Linguistics* (Oxford: Oxford University Press), pp. 328–57.

Curnow, Timothy Jowan (2001) 'What Language Features Can Be "borrowed"?', in Alexandra Y. Aikhenvald and R. M. W. Dixon (eds), *Areal Diffusion and Genetic Inheritance: Problems in Comparative Linguistics* (Oxford: Oxford University Press), pp. 412–36.

Dahl, Östen (2001) 'Principles of Areal Typology', in Martin Haspelmath, Ekkehard König, Wulf Oesterreicher, and Wolfgang Raible (eds), *Language Typology and Language Universals: An International Handbook*, vol. 2 (Berlin: Mouton de Gruyter), pp. 1456–70.

Darnell, Regna and Joel Sherzer (1971) 'Areal Linguistic Studies in North America: A Historical Perspective', *International Journal of American Linguistics*, vol. 37, pp. 20–8.

Décsy, G (1973) *Die linguistische Struktur Europas: Verganenheit, Gegenwart, Zukunft*. Wiesbaden: Harrassowitz.

Diakonof, I. M. (1990). 'Language Contacts in the Caucasus and the Near East', in Thomas Markey and John Greppin (eds), *When Worlds Collide* (Ann Arbor, MI: Karoma), pp. 53–65.

Dimmendaal, Gerrit J. (2001) 'Areal Diffusion Versus Genetic Inheritance: An African Perspective', in Alexandra Y. Aikhenvald and R. M. W. Dixon (eds), *Areal Diffusion and Genetic Inheritance: Problems in Comparative Linguistics* (Oxford: Oxford University Press), pp. 358–92.

Dixon, R. M. W. (1997). *The Rise and Fall of Languages* (Cambridge: Cambridge University Press).

Dryer, Matthew (1989) 'Large Linguistic Areas and Language Sampling', *Studies in Language*, vol. 13, pp. 257–92.

Ebel, Hermann (1856) *Über die Lehnwörter der deutsche Sprache* (Berlin: Programm Lehr- und Erziehungs-Institut auf Ostrowo bei Filehre).

Emeneau, Murray B. (1956) 'India as a Linguistic Area', *Language*, vol. 32, pp. 3–16; reprinted in *Language and Linguistic Area, Essays by Murray B. Emeneau*, selected and introduced by Anwar S. Dil (Stanford: Stanford University Press), pp. 38–65.

Emeneau, Murray B. (1965) 'India and Linguistic Areas', *India and Historical Grammar*. Ammamalai University, Department of Linguistics, Pub. No. 5, 25–75; reprinted: *Language and Linguistic Area, Essays by Murray B. Emeneau*, selected and introduced by Anwar S. Dil (Stanford: Stanford University Press), pp. 126–66.

Emeneau, Murray B. (1971) 'Dravidian and Indo-Aryan: The Indian Linguistic Area', in André F. Sjoberg (ed.), *Symposium on Dravidian civilization* (New York: Jenkins Publishing Co, Pemberton Press); reprinted in *Language and Linguistic Area, Essays by Murray B. Emeneau*, selected and introduced by Anwar S. Dil (Stanford: Stanford University Press), pp. 167–96.

Emeneau, Murray B. (1974) 'The Indian Linguistic Area Revisited', *International Journal of Dravidian Linguistics*, vol. 3, pp. 92–134; reprinted in *Language and*

linguistic area, essays by Murray B. Emeneau, selected and introduced by Anwar S. Dil (Stanford: Stanford University Press), pp. 197–249.
Emeneau, Murray B. (1978). 'Review of Defining a Linguistic Area, by Colin P. Masica'. *Language*, vol. 54, pp. 201–10; reprinted with additions in *Language and Linguistic Area, Essays by Murray B. Emeneau*, selected and introduced by Anwar S. Dil (Stanford: Stanford University Press), pp. 1–18.
Friedrich, Paul (1975) *Proto-Indo-European Syntax: The Order of Meaningful Elements*. Journal of Indo-European Studies, Memoir 1 (Butte, Montana: College of Mineral Science).
Garrett, Andrew (1999) 'A New Model of Indo-European Subgrouping and Dispersal', *Berkeley Linguistics Society*, vol. 25, pp. 146–56.
Giannini, Stefania and Stefania Scaglione (2002) 'On Defining the Notion of Areality Coefficient: The Diagnostic Value of Quantitative Criteria', in Paolo Ramat and Thomas Stolz (eds), *Mediterranean Languages: Papers from the MEDTYP Workshop, Tirrenia, June 2000* (Bochum: Brockmeyer), pp. 151–70.
Girard, (abbé) Gabriel (1747) *Les vrais principes de la langue française ou la parole réduite en méthode conformément aux loix de l'usage en seize discours* (Paris: Le Breton).
Gumperz, John J. and Robert Wilson (1971). 'Convergence and Creolization: A Case from the Indo-Aryan/Dravidian Border in India', in Dell Hymes (ed.), *Pidginization and Creolization* (Cambridge: Cambridge University Press), pp. 151–67.
Haarmann, Harald (1976) *Aspekte der Areal-typologie: die Problematik der europäischen Sprachbünde* (Tübingen: Gunter Narr).
Haas, Mary R. (1978) *Language, Culture, and History, Essays by Mary R. Haas*, selected and introduced by Anwar S. Dil (Stanford: Stanford University Press).
Haig, Jeffrey (2001) 'Linguistic Diffusion in Present-Day East Anatolia: From Top to Bottom', in Alexandra Y. Aikhenvald and R. M. W. Dixon (eds), *Areal Diffusion and Genetic Inheritance: Problems in Comparative Linguistics* (Oxford: Oxford University Press), pp. 195–224.
Hamp, Eric (1977) 'On Some Questions of Areal Linguistics', *Berkeley Linguistics Society*, vol. 3, pp. 279–82.
Haspelmath, Martin (1998) 'How Young Is Standard Average European', *Language Sciences*, vol. 20, pp. 271–87.
Heath, Jeffrey (1978) *Linguistic Diffusion in Arnhem Land* (Canberra: Australian Institute of Aboriginal Studies).
Heath, Jeffrey (1997) 'Lost Wax: Abrupt Replacement of Key Morphemes in Australian Agreement Complexes', *Diachronica*, vol. 14, pp. 197–232.
Heine, Bernd (1994) 'Areal Influence on Grammaticalization', in M. Pütz (ed.), *Language Contact and Language Conflict* (Amsterdam: John Benjamins), pp. 55–68.
Heine, Bernd and Tania Kuteva (2001) 'Convergence and Divergence in the Development of African Languages', in Alexandra Y. Aikhenvald and R. M. W. Dixon (eds), *Areal Diffusion and Genetic Inheritance: Problems in Comparative Linguistics* (Oxford: Oxford University Press), pp. 393–411.
Henderson, Eugénie J. A. (1965) 'The Topography of Certain Phonetic and Morphological Characteristics of South East Asian Language', *Lingua*, vol. 15, pp. 400–34.
Hickey, Raymond (1999) 'Ireland as a Linguistic Area', in J. P. Mallory (ed.), *Language in Ulster/Ulster Folklife* (*Ulster Folklife*, vol. 45) (Hollywood, Co. Down, Northern Ireland: Ulster Folklife), pp. 36–53.
Hill, Jane (1978) 'Language Contact Systems and Human Adaptations', *Journal of Anthropological Research*, vol. 34, pp. 1–26.

Holt, Dennis and William Bright (1976) 'La Lengua Paya Y Las Fronteras Lingüísticas de Mesoamérica', *Fronteras de Mesoamérica*, 14a Mesa Redonda, 1, Sociedad Mexicana de Antropología, México, pp. 149–56.

Hübschmann, Heinrich (1875) 'Über die Stellung des Armenischen im Kreise der indogermanischen Sprachen', *Zeitschrift für vergliechende Sprachforschung*, vol. 23, pp. 5–49.

Jacobs, Melville (1954) 'The Areal Spread of Sound Features in the Languages North of California', *Papers from the Symposium on American Indian Linguistics Held At Berkeley, July 7, 1951*, pp. 46–56. *University of California Publications in Linguistics*, vol. 10, pp. 1–68. (Berkeley).

Jakobson, Roman (1931) 'Über die Phonologischen Sprachbünde', *Travaux du Cercle Linguistique de Prague*, vol. 4, pp. 234–40 (Réunion phonologique internationale tenue a Prague, 18–21/XII, 1930); reprinted 1971 in *Roman Jakobson. Selected Writings*, vol. 1 (The Hague: Mouton), pp. 137–43.

Jakobson, Roman (1938) 'Sur la théorie des affinités phonologiques entre les langues', *Actes du quatrieme congres international de linguists* (tenu a Copenhague du 27 août 1er septembre, 1936), 48–58; reprinted, 1949, as an appendix to *Principes de phonologie*, by N. S. Troubetzkoy (Paris: Klincksieck), pp. 351–65.

Jakobson, Roman (1944) 'Franz Boas' Approach to Language', *International Journal of American Linguistics*, vol. 10, pp. 188–95.

Johanson, Lars (1998) 'Code-Copying in Irano-Turkic', *Language Sciences*, vol. 20, pp. 325–37.

Katz, Harmut (1975) *Generative Phonologie und phonologische Sprachbünde des Ostjakischen un Samojedischen* (Munich: Wilhelm Fink).

Konow, Sten (ed.) (1906) *Linguistic Survey of India*. Calcutta: Superintendent, Government Printing. (Reprint 1967, 1973 (New Delhi: Motilal Banarsidass))

Kopitar, Jeernej (1829)[1857] 'Albanische, walachische und bulgarische Sprache', *Jahrbüchern der Literatur*, vol. 46, pp. 59–106. Vienna. (Reprinted 1857: *Kleinere Schriften sprachwissenschaftlichen, geshichtlichen, ethnograpischen, und rechtshistorischen Inhalts*, in Fr. Miklosich, Theil 1 (Vienna: F. Beck).)

Koptjevskaja-Tamm, Maria (2002) 'The Circum-Baltic Languages – a Contact-Superposition Zone in the European Periphery', in Paolo Ramat and Thomas Stolz (ed.), *Mediterranean Languages: Papers from the MEDTYP Workshop, Tirrenia, June 2000* (Bochum: Brockmeyer), pp. 209–22.

Koptjevskaja-Tamm, Maria and Bernhard Wälchli (2001) 'The Circum-Baltic Languages: An Areal-Typological Approach', in Östen Dahl and Maria Koptjevskaja-Tamm (eds), *Circum-Baltic Languages* (Amsterdam: John Benjamins), pp. 615–750.

Kroskrity, Paul V. (1993) *Language, History, and Identity: Ethnolinguistic Studies of the Arizona Tewa* (Tucson: University of Arizona Press).

Kuhn, Adelbert (1861) *Beiträge zur vergleichendem Sprachforschung auf dem Gebiete der arischen, celtischen und slawischen Sprachen* (Berlin: Dummler).

Kuteva, Tania (1998) 'Large Linguistic Areas in Grammaticalization: Auxiliation in Europe', *Language Sciences*, vol. 20, pp. 289–311.

LaPolla, Randy (2001) 'The Role of Migration and Language Contact in the Development of the Sino-Tibetan Language Family', in Alexandra Y. Aikhenvald and R. M. W. Dixon (eds), *Areal Diffusion and Genetic Inheritance: Problems in Comparative Linguistics*, (Oxford: Oxford University Press), pp. 225–4.

Lehiste, Ilse (1988) *Lectures on Language Contact* (Cambridge, Mass.: MIT Press).

Martinet, André (1956) 'Diffusion of Languages and Structural Linguistics', *Romance Philology*, vol. 6, pp. 5–13.

Masica, Colin P. (1976) *Defining a Linguistic Area: South Asia* (Chicago: University of Chicago Press).
Masica, Colin P. (1992) 'Areal Linguistics', in William Bright (ed.), *International Encyclopedia of Linguistics* (Oxford: Oxford University Press), pp. 108–12.
Matisoff, James A. (2001) 'Genetic Versus Contact Relationship: Prosodic Diffusibility in South-Easte Asian Languages', in Alexandra Y. Aikhenvald and R. M. W. Dixon (eds), *Areal Diffusion and Genetic Inheritance: Problems in Comparative Linguistics* (Oxford: Oxford University Press), pp. 291–327.
Matthews, Peter (1997) *The Concise Oxford Dictionary of Linguistics* (Oxford: Oxford University Press).
Meillet, Antoine (1921) *Linguistique historique et linguistique générale*, Collection linguistique publiée par la Société de Linguistique de Paris, 8 (Paris: Champion) (new edition 1975).
Meillet, Antoine (1967) *The Comparative Method in Historical Linguistics* (Paris: Champion) (English translatin 1925: *La méthode comparative en linguistique historique*, Institutet for Sammenlingende Kulturforskning, Publikationer, A, 2, Oslo).
Miklosich, Franz von (1861) 'Die slavischen Elemente im Rumanischen', *Denkschriften der philosophisch-historische Classe* Kaiserliche Akademie der Wissenschaft, Wien, Commission, vol. 20, pp. 1–88 (Vienna: K. Gerolds Sohn).
Müller, Max (1861) *Lectures on the Science of Language* (London: Longmans, Green, and Co).
Nadkarni, M (1975) 'Bilingualism and Syntactic Change in Konkani', *Language*, vol. 51, pp. 672–83.
Nichols, Johanna (1992) *Linguistic Diversity in Time and Space* (Chicago: University of Chicago Press).
Nichols, Johanna (1995) 'Diachronically Stable Structural Features', in Henning Andersen (ed.), *Historical Linguistics 1993: Selected Papers from the 11th International Conference on Historical Linguistics* (Amsterdam: John Benjamins), pp. 337–56.
Nichols, Johanna (1997) 'Modeling Ancient Population Structures and Movement in Linguistics', *Annual Review of Anthropology*, vol. 26, pp. 359–84.
Nichols, Johanna (1998) 'The Eurasian Spread Zone and the Indo-European Dispersal', in Roger Blench and Matthew Spriggs (eds), *Archaeology and Language II: Archaeological Data and Linguistic Hypotheses* (London: Routledge), pp. 220–66.
Powell, John Wesley (1891) *Indian Linguistic Families of America North of Mexico*. Seventh annual report, Bureau of American Ethnology, 1–142 (Washington, DC: Government Printing Office); reprinted 1966 in *Franz Boas: Introduction to Handbook of American Indian Languages; J. W. Powell: Indian Linguistic Families of America North of Mexico*, in Preston Holder (Lincoln, Neb.: University of Nebraska Press.)
Ramanujan, A. K. and Colin Masica (1969). 'Toward a Phonological Typology of the Indian Linguistic Area', in Thomas Sebeok (ed.), *Current Trends in Linguistics*, vol. 5 (The Hague: Mouton), pp. 543–77.
Ramat, Paolo (2002) 'Introduction', in Paolo Ramat and Thomas Stolz (eds.), *Mediterranean Languages: Papers from the MEDTYP Workshop, Tirrenia, June 2000* (Bochum: Brockmeyer), pp. ix–xv.
Ramat, Paolo and Thomas Stolz (eds) (2002) *Mediterranean Languages: Papers from the MEDTYP Workshop, Tirrenia, June 2000* (Bochum: Brockmeyer).
Reiter, Norbert (1991) 'Ist der Sprachbund ein Werk des Satans?', *Zeitschrift für Balkanologie*, vol. 26, pp. 43–62.

Renfrew, Colin (2000) 'At the Edge of Knowability: Towards a Prehistory of Languages', *Cambridge Archaeological Journal*, vol. 10, no. 1, pp. 7–34.
Sandfeld, Kristian (1902) 'Der Schwand des Infinitivs im Rumänischen und den Balkansprachen', *Jahresbericht des Instituts für rumänische Sprache zu Leipzig*, vol. 9, pp. 75–131.
Sandfeld, Kristian (1912) 'Notes sur les calques linguistiques', *Festschrift Vilhelm Thomsen* (Leipzig), pp. 166–73.
Sandfeld, Kristian (1930) *Linguistique balkanique: Problemes et resultants*, Collection Linguistique, Publication par la Société de Linguistique de Paris, 31 (Paris: Champion).
Sandfeld, Kristian (1934) 'Notes de syntaxe comparée des langues balkaniques', *Revue Internationale des Études Balkaniques*, vol. 1, pp. 100–9.
Sandfeld, Kristian (1938) 'Les interférences linguistiques', *Actes du quatrieme congres international de linguists* (held in Copenhagen 27 August–1 September 1936) (Copenhagen), pp. 60–5.
Sarhimaa, Anneli (1991) 'Karelian Sprachbund? Theoretical Basis of the Study of Russian/Baltic-Finnic contacts', *Finnisch-Ugrische Forschungen*, vol. 50, pp. 209–19.
Schaller, Helmut Wilhelm (1975) *Die Balkansprachen: Eine Einführung in die Balkanphilologie* (Heidelberg: Winter).
Schleicher, August (1850) *Die Sprachen Europas in systematischer Übersicht: linguistische Untersuchungen* (Bonn: H. B. König).
Schmidt, Johannes (1872) *Die Verwandtschaftverhältnisse der indogermanischen Sprachen* (Weimar).
Schuchart, Hugo Ernst Mario (1866–8) *Der Vokalismus des Vulgärlateins*. vols. 1–2, 1866–77; vol. 3, 1868 (Leipzig: Teubner).
Sebeok, Thomas (1950) 'The Importance of Areal Linguistics in Uralic Studies', *Memoires de la Société Finno-Ougrienne*, vol. 98, pp. 99–106.
Seidel, Eugen (1965) 'Zur Problematik des Sprachbundes', *Beiträge zur Sprachwissenschaft, Volkskunde und Literaturforschung, W. Steinitz zum 60. Geburtstag* (Berlin), pp. 372–81.
Sherzer, Joel (1973) 'Areal linguistics in North America', in Thomas Sebeok (ed.), *Current Trends in Linguistics*, vol. 10 (The Hague: Mouton), pp. 749–95.
Sherzer, Joel (1976) *An Areal-Typological Study of American Indian Languages North of Mexico* (Amsterdam: North Holland Publishing Co.)
Stanford, C. B. (1998) 'The Social Behavior of Chimpanzees and Bonobos', *Current Anthropology*, vol. 39, pp. 399–407.
Stolz, Thomas (2002) 'No Sprachbund Beyond this Line! On the Age-Old Discussion of How to Define a Linguistic Area', in Paolo Ramat and Thomas Stolz (eds), *Mediterranean Languages: Papers from the MEDTYP Workshop, Tirrenia, June 2000* (Bochum: Brockmeyer), pp. 259–81.
Thomason, Sarah G. (2001) *Language Contact: An Introduction* (Edinburgh: Edinburgh University Press).
Thomason, Sarah G. and Terrence Kaufman (1988) *Language Contact, Creolization, and Genetic Linguistics* (Berkeley: University of California Press).
Toman, Jindrich (1995) *The Magic of a Common Language* (Cambridge, Mass.: MIT Press).
Tosco, M (2000) 'Is There An Ethiopian Language Area?', *Anthropological Linguistics*, vol. 42, pp. 329–65.
Trask, R. L. (2000) *The Dictionary of Historical and Comparative Linguistics* (Edinburgh: Edinburgh University Press).
Trubetzkoy, Nikolai Sergeevich (1923) 'Vavilonskaja bashnja I smeshenie jazykov' [The Tower of Babel and the confusion of languages], *Evrazijskij vremennik*, vol. 3, pp. 107–24. [Cited in Toman 1995.]

Trubetzkoy, Nikolai Sergeevich (1928) [Proposition 16]. *Acts of the First International Congress of Linguists*, 17–18. (Leiden).
Trubetzkoy, Nikolai Sergeevich (1931) 'Phonologie und Sprachgeographie', *Travaux de Circle Linguistique de Prague*, vol. 4, pp. 228–34. (French translation, 1949, reprinted 1970: appendix to *Principes de Phonologie* (Paris: Klincksieck), pp. 343–50.)
Trubetzkoy, Nikolai Sergeevich (1939) 'Gedanken über das Indogermanenproblem', *Acta Linguistica*, vol. 1, pp. 81–9.
Trudgill, Peter (1983) *On Dialect: Social and Geographic Perspectives* (New York: New York University Press).
van der Auwera, Johan (1998a) 'Revisiting the Balkan and Meso-American Linguistic Areas', *Language Sciences*, vol. 20, pp. 259–70.
van der Auwera, Johan (1998b) 'Conclusions', in Johan van der Auwera (ed.), *Adverbial Constructions in the Languages of Europe* (Berlin: Mouton de Gruyter), pp. 813–36.
Velten, H. V. (1943) 'The Nez Perce Verb', *Pacific Northwest Quarterly*, vol. 34, p. 271.
Vendryes, Joseph (1968)[1921] *Le langage: Introduction linguistique à l'histoire* (Paris: Albin Michel).
Voegelin, Carl F. (1945) 'Influence of Area in American Indian Linguistics', *Word*, vol. 1, pp. 54–8.
Voegelin, Carl F. (1961) 'Culture Area: Parallel With Typological Homogeneity and Heterogeneity to North American Language Families', *Kroeber Anthropological Society Papers*, vol. 25, pp. 163–80.
Wagner, H. (1964) 'Nordeuropäische Lautgeographie', *Zeitschrift für celtische Philologie*, vol. 29, pp. 225–98.
Watkins, Calvert (2001) 'An Indo-European Linguistic Area and Its Characteristics: Ancient Anatolia. Areal Diffusion as a Challenge to the Comparative Method?, in Alexandra Y. Aikhenvald and R. M. W. Dixon (eds), *Areal Diffusion and Genetic Inheritance: Problems in Comparative Linguistics* (Oxford: Oxford University Press), pp. 44–63.
Weinreich, Uriel (1953) *Languages in Contact: Findings and Problems* (New York: Linguistic Circle of New York).
Whitney, William Dwight (1868) *Language and the Study of Language* (New York: Scribner & Co.).
Whitney, William Dwight (1875) *The Life and Growth of Language* (New York: D. Appleton & Co.) (Reprinted 1979: New York: Dover).
Winter, Werner (1973) 'Areal Linguistics: Some General Considerations', in Thomas Sebeok (ed.), *Current Trends in Linguistics*, vol. 11 (The Hague: Mouton), pp. 135–47.
Wintschalek, Walter (1993) *Die Areallinguistik am Beispiel syntaktischer Übereinstimmungen im Wolga-Kama-Areal*, Studia Uralica, 7 (Wiesbaden: Harrassowitz).
Wolff, Hans (1959) 'Subsystem Typologies and Areal Linguistics', *Anthropological Linguistics*, vol. 1, no. 7, pp. 1–8.
Zeps, Valdis (1962) *Latvian and Finnic Linguistic Convergences*, Uralic and Altaic series, 9 (Bloomington: Indiana University Press).

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