1 Why can languages be similar?

Languages can resemble each other in categories, constructions, and meanings, and in the actual forms used to express them. Categories can be similar because they are universal—for instance, every language has some way of asking a question or framing a command. Occasionally, two languages share a form by pure coincidence. In both Dyirbal, an Australian language from North Queensland, and Jarawara, an Arawá language from Southern Amazonia, *bari* means ‘axe’. Both Goemai (Angas-Goemai subgroup of Chadic, Afroasiatic: Birgit Hellwig, p.c.) and Manambu (Ndu family, New Guinea) happen to use *a:s* for ‘dog’. Similarities due to universal properties of a language are of interest for universal grammar, while chance coincidences are no more than curious facts. What these two kinds of similarities have in common is that they tell us nothing about the history of languages or their speakers. In this volume we focus on two other types of similarities: those due to genetic inheritance and those due to areal contact.

A shared feature may be based on common linguistic origin. Then, the languages can be shown to have descended from the same ancestor (this is achieved by using rigorous procedures of historical and comparative linguistics). Related languages ‘will pass through the same or strikingly similar phases’: this ‘parallelism in drift’ (Sapir 1921: 171–2; LaPolla 1994; Borg 1994)

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1 I am grateful to R. M. W. Dixon, Aet Lees, Peter Bakker, Eithne Carlin, Victor Friedman, John Hajek, Birgit Hellwig, Gerd Jendraschek, Randy LaPolla, Marianne Mithun, Stephen Morey, Anne Storch, and Ghil’ad Zuckermann, and to all the other participants and auditors of the International Workshop on Grammars in Contact, for their incisive comments, feedback, and criticisms.
accounts for additional similarities between related languages, even for those ‘long disconnected’.

Alternatively, shared features may result from geographic proximity, contact, and borrowing. If two or more languages are in contact, with speakers of one language having some knowledge of the other, they come to borrow linguistic features—including phonetic traits and habits of pronunciation, distinctive sounds (phonemes), construction types, grammatical categories, and the organization of lexical and grammatical meanings. There can also be borrowing of lexical and of grammatical forms. The extent of this varies, depending on a number of cultural and social factors, including the degree of speakers’ awareness and sense of purism, and also on the structure of the languages in contact.

Historically, every language must have undergone a certain amount of influence from its neighbours. The impact of contact is stronger and easier to discern in some languages, weaker and more diffuse in others. See §2 below.

No linguistic feature—be it a form, or a pattern—is entirely ‘borrowing-proof’. Most statements about constraints and limits to diffusion warrant exceptions. Curnow’s (2001) suggestion that ‘the attempt to develop any universal hierarchy of borrowing should perhaps be abandoned’ is correct in its essence. And yet some grammatical and other features are particularly open to—and others are more resistant to—diffusion. A form can be transferred from one language into the next, a language’s own forms and constructions may be reanalyzed, or a pattern translated morpheme per morpheme into another language (creating a ‘calque’). Even when the same form, or category, is borrowed between structurally different languages and in different circumstances, both the mechanisms and the outcomes are likely to be different. In Haase and Nau’s (1996a: 7) words, ‘anything can be borrowed, but not any way’. Kinds of contact-induced changes and their mechanisms are discussed in §3.

As Friedman puts it in §3.1 of Chapter 8, ‘it is certainly the case that anything can be borrowed, but it is equally the case that not everything is borrowed in a contact situation in which languages maintain separate identities’. To come closer to identifying what is borrowed, we approach ‘borrowability’ of forms and patterns in terms of facilitating factors rather than hierarchies, restrictions, and constraints (let alone putative universals). Preferences at work in borrowing patterns and forms depend on the expression and function of a category, on its usage, and on the ways it correlates with cultural stereotypes. A plethora of social factors play a role—these include language attitudes and receptivity to ‘foreign’ forms. Pre-existing structural similarities between languages in contact also facilitate contact-induced change. However, the claim that only ‘typologically compatible’ systems can
influence each other is erroneous. The more facilitating factors there are at work, the higher the chance of contact-induced change: we return to this Mutual Reinforcement Principle in §4.1.

Languages reflect the sociolinguistic history of their speakers. A plethora of sociolinguistic parameters have an impact on the outcomes of language contact, interacting with preferences in contact-induced change in grammar and affecting typological diversity. Languages become similar in different ways; and the net results of language contact differ. §5 below provides a summary and an overview of the volume.2

This introductory chapter is effectively two in one: setting the scene for the volume on the basis of an examination of the literature, and drawing together the conclusions resulting from the discussion and results in the individual chapters within this volume.

Only in-depth empirical studies of a variety of language contact situations and their impact on the overall structure of one or more languages, based on first-hand fieldwork, will enable us to work out inductive generalizations and preferences according to which some aspects of grammar spread more readily than others. This is what chapters in this volume aim at.3

2 Curnow (2001) provides an overview of borrowed forms and patterns. The question of what can and what cannot be borrowed has been the focus of studies of language contact since at least Whitney (1881). Various hierarchies of, and constraints on, borrowability have been suggested and subsequently criticized in numerous publications, among them Weinreich (1953), Moravcsik (1978), Aikhenvald (2002), Matras (1998), Campbell (1993), Harris and Campbell (1995: 120–50), and Curnow (2001).

Some scholars have even expressed doubt as to whether looking for such constraints and hierarchies is at all a sensible task (Thomason 2001a, 2001b; Thomason and Kaufman 1988: 14). However, the failure to establish an overarching hierarchy of borrowability does not imply the absence of valid tendencies in linguistic diffusion (cf., for instance, the incisive analysis by Heath 1978: 105–15).

Given the enormous amount of literature on language contact, I could not do justice to more than a fraction of it in this (necessarily programmatic) chapter which is not intended to be an exhaustive encyclopedia of language contact. Full or partial studies have been accomplished for some parts of the world. These include contacts between Iranian and Turkic languages thoroughly researched by Johanson (2002), Soper (1996), and others; Australia (especially Heath 1978, 1981; Dixon 2001; Dench 2001; and a comprehensive study in Dixon 2002); the Balkans (e.g. Joseph 1991; Friedman 1997 and references there); Europe (Haase 1992; Nau 1995; Stolz 1991), India and South Asia (e.g. Emeneau 1980; Masica 1976, 1991; Abbi 1991, 2002; Masica 2001; Hock 2001); Mesoamerica (Campbell et al. 1986; Stolz and Stolz 1996; Brody 1995); the Vaupés in north-west Amazonia (Aikhenvald 1996, 1999c, 2002), various areas of language contact in Africa (especially Nurse 2000; Nurse and Hinnebusch 1993; Dimmendaal 2001; Myers-Scotton and Okeju 1973; an overview in Heine and Kuteva 2002; and Heine and Kuteva 2005) and in the Sino-Tibetan domain (LaPolla 2001), as well as in the Pacific (Thurston 1987, 1989, 1994; Ross 2001); and North America (Sherzer 1973, 1976; Beck 2000; Newman 1974; Brown 1999; overview in Mithun 1999). Due to limitations of space, I could only provide a limited number of illustrative examples. At this stage, I have chosen to avoid any definite statements concerning frequency of different kinds of language contact. This is a task for the future, when further empirically based systematic studies of language contact situations throughout the world have become available.

3 We thus keep in line with the Saussurian principle that every language is a balanced system rather than a random set of meanings and forms, captured in Antoine Meillet’s (1948: 16) famous statement
A word on terminology. The term ‘borrowing’ is used here in its broad sense, as ‘the transfer of linguistic features of 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 within a geographical area or as recurrent borrowing within a linguistic area. Diffusion within an area can be unilateral (when it proceeds from one source) or multilateral (when it involves several sources). See the glossary of terminological conventions at the end of the volume.

2 How languages affect each other: the effects of language contact

2.1 ‘Layered’ languages

If one language is significantly different from its proven genetic relatives, language contact is the ‘usual suspect’. Cantonese (Chapter 9) has features not found in most Sinitic languages—such dissimilarities warrant a non-genetic explanation. And if two languages are (or have been) in contact and share certain features, we immediately suspect that these features have been transferred from one to the other. Our suspicion will be strengthened if the two languages are genetically unrelated, and the features they share are typical of the family to which only one of them belongs. Tibeto-Burman languages spoken in the ‘Sino-sphere’ tend to be more isolating, while those spoken in the ‘Indo-sphere’ tend to be more morphologically complex (LaPolla 2001). Many features of the Austronesian languages of the Siasi subgroup (spoken in the interior of West New Britain: Thurston 1987) which differentiate them from other Siasi languages are shared with Aném, a non-Austronesian language, and can thus be attributed to language contact.

In these and other instances discussed in the present volume, intensive language contact results in discernible diffusion of patterns—phonetic, phonological, morphological, syntactic, and especially pragmatic. This can be, but does not have to be, accompanied by some diffusion of forms. Contact-induced innovations are constantly being added to languages over the course that a language is ‘système où tout se tient’ (a system where everything holds together’). We eschew metaphors like ‘feature pool’ (Mufwene 2001) which gloss over the fact that the interaction of features and their borrowability may well depend on typological correlations between them (for instance, if a language becomes verb initial through contact, it may be expected to also develop prepositions), and on typological naturalness of a phenomenon—for instance, if a language develops gender under contact influence, it is likely first to develop it in third person, rather than in first person.

4 An alternative term for both borrowing and linguistic diffusion is ‘interference’, defined as a transfer of features from one’s first language into one’s second language (cf. Trask 2000: 169). Unlike diffusion, interference often applies to cases of individual bilingualism, and second language acquisition. A recently suggested alternative is ‘code-copying’ (see Johanson 2002).
of their development, as if piling tier upon tier of ‘naturalized’ foreign elements. The result is *layered* languages: the inherited ‘core’ is discernible underneath the subsequent ‘layers’ of innovative influence from outside.

In most cases, contact-induced change affects only some aspects of the language. Take the Arabic of Nigeria. Its morphology, lexicon, and phonology show that it is undoubtedly Semitic. Many of its syntactic structures and the semantics of numerous idioms are strikingly similar to the neighbouring languages of Lake Chad. This does not make Nigerian Arabic ‘unclassifiable’. Neither does it ‘prove’ that Nigerian Arabic is not a Semitic language any more. It is simply the case that, as far as genetic classification goes, sharing forms and reconstructing forms is more important than sharing structures (see Owens 1996).

Figure 1, inspired by Owens (1996), reflects the scale of potential layering: which parts of the language are more likely to be shared with genetic relatives, and which are easily attributable to language contact and diffusion. The scale reflects the ‘state-of-the-art’ of historical and comparative linguistics. As Nichols (1996: 64) put it, ‘the diagnostic evidence [for genetic relationship] is grammatical, and it combines structural paradigmaticity . . . and syntagmaticity with concrete morphological forms’, thus stressing the importance of shared inflectional paradigms in identifying genetic links between languages.

For example, Tariana is an Arawak language with a distinct and often easily recognizable ‘layer’ of Tucanoan influence (Chapter 10). Hup undoubtedly belongs to the Nadahup (Makú) family—but the comparison with related languages shows the layer of Tucanoan influence (Chapter 11). And we can detect a Romance ‘layer’ in Tetun Dili (Chapter 6); the Ubangi influence on Belanda Bor, a Western Nilotic language; the Eastern Nilotic ‘coating’ in the Western

![Figure 1](https://example.com/)  
*Figure 1* Genetic versus contact-induced elements in a language
Nilotic Labwor, coming from Karamojong (Chapter 3); the Ewe influence in Likpe (Chapter 4); the Carib elements in Mawayana, from the Arawak family (Chapter 13); the Quechua imprints in another Arawak language, Amuesha (Chapter 12); and the Romance component in Basque (Chapter 5).

Along similar lines, Romani remains recognizably Indic despite layers from Greek and other European contact languages (Chapter 8). Maltese remains Semitic, despite numerous forms and patterns of Italian descent (Tosco 1996; and see Borg 1994, on parallel development in Maltese, Cypriot Arabic, and other Arabic dialects). Despite the strong Indo-European influence in Modern Hebrew phonology and idioms, no reputable comparative linguist would suggest that this is no longer a Semitic language. In none of these cases has language contact affected the affiliation of languages.

Every language must have undergone some influence from its neighbours at a certain point in time. In Thurston’s (1987: 93) words, ‘all languages are mixed languages insofar as all have copied lexical forms and other linguistic resources from neighbouring languages’. So, isn’t every language ‘layered’ in one way or another? The answer is ‘yes’. But the significance of this varies.

The impact of contact—or, in Swadesh’s words (1951), ‘diffusional cumulation’—is stronger and more central in some languages than in others. These languages are ‘atypical’ for their families. Tariana, Mawayana, and Amuesha look strikingly un-Arawak in a number of ways. And a few structures in Modern Hebrew, Maltese, and Nigerian Arabic have a clear non-Semitic ‘feel’ to them. Many distinctive features of Cantonese (§4 of Chapter 9) are strikingly non-Sinitic—and they can be convincingly attributed to areal diffusion.

Dawkins (1916: 198) expressed the same idea of different ‘layers’ in Cappadocian Greek in somewhat more imaginative terms—‘the body has remained Greek, but the soul has become Turkish’.

Metaphors in linguistics should be used sparingly: we may never be able to define the ‘soul’ of a language, or reconstruct ‘cognitive structures’ which perhaps underlie contact-induced change reflected in calqued idioms and shared discourse patterns. The idea of ‘layering’ is much more ‘down to earth’: it reflects the procedure of teasing apart subsequent ‘layers’ of discernible impact from neighbouring language, on the way to identifying the ‘genetic core’. ‘Layering’ has an additional flavour to it inasmuch as this term reflects chronologically organized stages of linguistic diffusion (see, for instance, §1 in Chapter 3 and Storch 2003: 177, Matras 2003/4, and §§4–5 of Chapter 12, examining distinct layers of Quechua borrowings in Amuesha, an Arawak language). The idea of ‘layering’ is also linked to the notion of ‘stratification’ (also known as ‘ditaxia’: Matthews and Yip 2001; Chappell 2001: 341), whereby different speech registers reflect different contact patterns. So, ‘high-register’
Cantonese is much more like Mandarin Chinese than its lower register which shares features with Tai-Kadai and Miao-Yao languages (§4.1 of Chapter 9).

Detecting ‘layers’ in languages is a heuristic procedure. And in all the instances quoted in this section the procedure has been successful: we know how to separate the layers of diffusion from the ‘core’ of genetic affiliation. But in quite a few other cases the picture is blurred.

2.2 How language contact can affect the language’s affiliation

Teasing apart similarities due to genetic inheritance and those due to borrowing of varied kinds is one of the hardest problems in comparative linguistics (cf. the classic controversy between Boas and Sapir: see Boas 1917, 1920; Sapir 1921: 205–20; Swadesh 1951). Ideally, if two languages descend from the same ancestor, the forms and their meanings must be easily relatable, via the application of established rules for phonological change and semantic change. In actual fact, the distinction between inherited and diffused similarities may be difficult to discern, especially in the situation of prolonged and uninterrupted diffusion of cultural and linguistic traits across an area.

If languages within an area are in a state of equilibrium, with no one language or group dominating others, languages converge towards a common prototype, with features and forms diffusing back and forth. A long-lasting diffusion area may result in layering of patterns and forms to such an extent that genetic relationships are undiscernible. This is the situation described for the Australian linguistic area (Dixon 1997, 2002), and for a number of sub-areas within it (see the excellent case study of the linguistic area of Arnhem land by Heath 1978, 1981, and also see Dench 2001; Dixon 2001). As a result of an intensive long-term diffusion, ‘no large genetic groups are recognizable

5 Similar problems arise when a language is claimed to be difficult to classify as belonging to one family or to another. LaPolla (2001: 241) mentions the case of Raji (Jangali), in north-eastern Uttar Pradesh (India), which is ‘so mixed with features that it is hard to determine if it is a Tibeto-Burman language heavily influenced by Indo-Aryan and Munda, or a Munda language heavily influenced by Tibeto-Burman and Indo-Aryan’. The question of contact-induced or genetic similarities is also relevant for proving the validity of large language groupings. The similarities among some Niger-Congo groupings and among Atlantic languages, and so-called ‘Altaic’ languages, may in fact be due to language contact, rather than any shared inheritance (Johanson 2002; Dixon 1997; and Aikhenvald and Dixon 2001b).

The effects of contact can obscure the relationships of languages to each other within an established family. Establishing subgroupings within a genetic family involves recognizing ‘a set of changes common to a particular subgroup which has occurred between the period of divergences of the family as a whole and that of the subgroup in question’ (Greenberg 1953: 49). Criterial features must be shared innovations. But innovations—crucial for establishing proper subgrouping within the family—may be due to contacts with neighbouring languages. And if we do not have enough information about the origin of a particular innovation, we will not be able to establish what the subgroups are. See further examples in Aikhenvald and Dixon (2001b).
within the Australian linguistic area’ (Dixon 2002: p. xiv). Diffusion of this sort involves a high degree of multilingualism and more-or-less symmetrical diffusion of both form and pattern within each group without any strict hierarchy or dominance. If such large-scale diffusion within a linguistic area (see below) goes on for a considerable time, ‘the convergence will obscure the original genetic relationships’ (Dixon 1997: 96). Then linguists ought not to be afraid to honestly say ‘we do not know, and are never likely to know’, whether a certain similarity is due to genetic origin or to geographical diffusion.

Extreme ‘layering’ of languages, with features and forms diffusing back and forth over thousands of years, results in obscuring the erstwhile genetic relationships and making it impossible to ‘peel off’ the actual layers. In the Australian context, only a number of ‘low-level genetic groups’ can be safely identified, by carefully applying the established comparative method (Dixon 2002: p. xxiv). Saying that Australian languages form one genetic family effectively bypasses the established criteria for recognizing genetic relationships followed in most other parts of the world.6 Yet, as the result of their long-standing interaction, ‘Australian languages share a distinctive typological profile, characterized by a number of parameters of variation… The two most important characteristics of the Australian linguistic area are (1) the areal distribution of most linguistic features, due to diffusion; and (2) cyclic change in terms of a number of area-defining typological properties’ (Dixon 2002: 691). To illustrate this, Dixon (Chapter 2) discusses the contact-induced spread of bound pronominals as an areal feature throughout Australia, promoting ‘mutual grammatical accommodation’ over contiguous languages and across the dialects of two multidialectal languages.

Similarities between languages can be suggestive of a genetic relationship, but not sufficient to postulate it with full assurance. Murrinh-patha and Ngan.gi-tjemerrri, two languages spoken in the Daly River region of Northern Australia, share only the cognate paradigms for portmanteau forms of inflecting simple verbs, but scarcely any other forms in grammar and almost none in the lexicon (Dixon 2002: 675). The paradigm of free pronouns is the only fully ‘Chadic’ feature in Tangale (Jungraithmayr 1995). Such examples are bound to remain ‘fringe’ puzzles to comparative linguists.

The origin of a non-inherited component may be obscure, even if the language’s affiliation is clearly established. Palikur, a North Arawak language spoken in northern Brazil and French Guiana, displays an array of highly

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6 As demonstrated by Dixon (2001: 89–98; 2002: 44–54), hypotheses like that of a ‘Pama-Nyungan phyllic family’ do not stand up to careful scrutiny.
unusual non-Arawak features, only some of which can be explained by
diffusional influence from neighbouring Carib languages. Amuesha, another
Arawak language, also has a number of non-Arawak structural features; only a
minority of these can be explained by contact with its former neighbour,
Quechua, while the origin of many of its unusual traits remains unknown (see
Chapter 12). Since most indigenous languages in these areas are extinct, we are
unlikely ever to know the exact source. In the absence of fully reliable data
and historical records, we will never be able to go beyond mere hypotheses.

2.3 Language contact: further alternatives and challenges

We may assume, for a moment, that languages can change either because of
internal processes, or as a result of ‘external’ influence—that is, language
contact. But the very dichotomy ‘language-internal change’ versus ‘language-
external change’ is not at all clear-cut (see Gerritsen and Stein 1992b). Several
factors are usually at work in orchestrating a change. To put it simply: in each
case, the possibility of multiple motivations muddies the waters. Here are
some examples.

Similarities between Irish English and Celtic languages have often been
interpreted as a result of direct contact influence. For example, the extensive
use of be-perfect in Irish English, e.g. they’re gone mad (Filppula 2003: 166–7),
is strikingly parallel to the be-perfect in Irish. Irish has no equivalent to
English have and has always used the verb ‘be’ to form the periphrastic
perfect. The case for contact influence would have been very strong, if the
Irish English be-perfect had had no equivalent in other dialects or in early
stages of English. In actual fact, ‘the rivalry between be vs. have in earlier
English was not settled in favour of the latter until relatively late, namely, the
early part of the nineteenth century’ (Filppula 2003: 167). This means that
the be-perfect in itself is better viewed as the result of language-internal
development whose frequency in Irish English—and its retention there—
was reinforced by close contact with Irish. We are faced with multiple
causation—both external and internal factors have played a role. Similar
eamples abound—see Chapter 5, on Basque, and especially Chapter 7, on
Pennsylvania German.

If languages are genetically related, we expect them to develop similar
structures, no matter whether they are in contact or not. And if genetically
related languages are in contact, trying to prove that a shared feature is
contact induced and not a ‘chance’ result of Sapir’s drift may be next to
impossible. A prime example of this is Pennsylvania German in contact with
English (see, for instance, §2.4 of Chapter 7). We can only say for sure that the
intrinsic tendencies in Pennsylvania German to develop in a similar direction
to English were reinforced by the current impact of English as—to a certain extent—a dominant ‘intruder’.

The complex interaction between the ‘internal’ and the ‘external’ in language change, and the ways in which one may reinforce or help reactivate the other, are a further obstacle to devising a ‘universal’ hierarchy for borrowability of forms and patterns. What is simply difficult to decide for linguists working on Germanic languages may be an insurmountable problem for languages from other, less ‘fortunate’, families and areas. If a language has hardly any historical record—and no grammatical reconstruction of a protolanguage is available—we may not even be aware of possible alternative analyses. What we take for purely contact-induced change may turn out to be another instance of multiple causation.

Identifying the details of multiple causation is often fraught with the unknown—like pieces of a puzzle irrevocably lost. Amuesha, an Arawak ‘mystery’ language, is a prime example ($§9$ of Chapter 12). But we do not even have to go as far as South America. Hebrew, throughout over 2,000 years of its documented history, has absorbed influences from Semitic and non-Semitic languages at every stage of its development. That is, an Indo-European-looking pattern in Modern Israeli Hebrew is subject to multiple interpretation in terms of its origin: it may be the result of an older layer of influence, reinforced by recent impact from Yiddish or Polish. We can recall that the major driving force in the ‘revival’ of Hebrew started in the 1880s was speakers of the Indo-European language Yiddish from Eastern Europe (that is, the Ashkenazi Jews) (Zuckermann 2003; Aikhenvald 1990).

As Bloomfield (1933: 481) put it, the historical ‘processes themselves largely escape our observation; we have only the assurance that a simple statement of their results will bear some relation to the factors that created these results’.

A careful examination of all relevant facts may allow us to filter out independent innovations, parallel development, and accidental similarities from bona fide contact-induced changes—any of which can reinforce the other. And even then we may not be able to arrive at one, definitive, conclusion.

2.4 Layered languages and ‘mixed’, or ‘intertwined’ languages

Intensive language contact with heavy diffusion of patterns—phonetic, phonological, morphological, syntactic, and especially pragmatic—with or without any diffusion of forms results in a layered, not a mixed language.

Languages known as ‘mixed’ or ‘intertwined’ arise as a result of a combination of special sociolinguistic circumstances with semi-conscious efforts to ‘create a language’, in which different parts of grammar and lexicon come from different languages. Media Lengua has a Spanish vocabulary and a
Quechua grammatical system; Romanichal Gypsies in Britain speak a language with a Romani lexicon and English grammar; while Michif spoken by the Métis (descendants of French fur traders and American Indian women) in Canada uses Cree (Algonquian) verbs and French nouns, and Copper Island Aleut, from the Bering Strait, has Aleut noun morphology and the Russian finite verb inflection, with vocabulary coming from both sources (Golovko 1994; Bakker 1996, 1997; further papers in Bakker and Mous 1994; Matras 2003, and in Matras and Bakker 2003). These languages—apparent exceptions to the assumption that each language has one genetic affiliation—are typically the result of an attempt to purposely create a special language, or a language register, by an ethnic group asserting its identity.

They come about as a result of semi-conscious language engineering, and reflect ‘either (a) split allegiance to two parental communities, in cases where the parental generation’s women and men have distinct origins, and the young generation forms a new ethnic group, or (b) maintenance of ethnic awareness in non-territorial minorities,’ often nomadic cultures—such as Para-Romani speakers in Europe (Matras 2003: 151–3). As Bakker (1996, 1997, 2000, 2003) has convincingly shown, the documented intertwined languages do not result from code switching or code mixing; neither are they products of heavy borrowing. The ways in which they come about are closely linked to speakers’ awareness of different components of a ‘language’ used for ‘identity-flagging’, and to the extent of conscious language engineering. Conscious engineering has affected languages which are not traditionally considered ‘mixed’ or ‘intertwined’—such as Estonian and Modern Hebrew. The impact of—and preferences in—language engineering shares similarities with contact-induced change (see §4.2.1–4.2.2).

2.5 Linguistic areas

The concept of linguistic area is central to the notion of diffusion. A linguistic area (or sprachbund) 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 traits, or combinations thereof, most of which are not found in languages from these families or subgroups spoken outside the area (see Emeneau 1956; Sherzer 1973: 760; and discussion in Tosco 2000).

Another well-known instance of ‘non-genetic’ languages which did not arise as a result of a normal and spontaneous course of language evolution and have more than one source or parent are trade languages, pidgins, and creoles. Given the ongoing controversy concerning their validity as a special language type and the highly specific social circumstances which warrant their emergence, we chose not to expand the present volume into this field.
How to locate the diagnostic traits, especially when at least some similarities between contiguous languages can be explained by accident, universals, and parallel development? As shown in the 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—for instance, verb-final constituent order, the existence of nasalized vowels, or the presence of perfective-imperfective opposition in the aspectual system—would not be assigned so much weight as a more rare, unusual characteristic—such as evidentiality (obligatory marking of information source). A further example of a fairly unusual feature is suppletive formation of negative and positive paradigms found in Mande languages, as well as in the genetically unrelated but geographically contiguous Songhay and Hausa (Kastenholz 2002).

Drastic changes in the use of syntactic constructions (such as, for instance, the replacement of 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 may be unusual for a subgroup or a family, without being typologically ‘exotic’. Chadic languages in contact with Benue-Congo languages have developed a monosyllabic word structure (Jungraithmayr 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 Benue-Congo, Kwa, or Adamawa-Ubangi languages to Chadic) can easily be established, this feature should be assigned special weight in this situation.

Along similar lines, the reciprocal is marked with a suffix on a verb in Oceanic languages on the north-west coast of West New Britain, 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 just with their (unrelated) neighbour, a Papuan language Anêm. This makes it a distinctive characteristic of the area (Thurston 1987: 79–80).

A typologically well-attested property cannot by itself be considered area defining. But the way properties cluster may be area specific. Campbell, Kaufman, and Smith-Stark (1986) single out four morphosyntactic features characteristic of the Mesoamerican 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; and
(d) Non-verb-final basic order, which may correlate with the absence of switch reference.

There are, in addition, numerous ‘pan-Mesoamerican’ 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 the genetically unrelated Tucanoan and Arawak families (see Chapters 10 and 11). These include:

(i) nasalization as a prosodic feature; voiced alveolar stop and liquid as allophones;
(ii) four to five evidentials marking the way in which the speaker has acquired information (whether seen, heard, inferred, assumed, or learnt from someone else);
(iii) classifiers used with demonstratives, numerals, and in possessive constructions;
(iv) a nominative-accusative profile, which includes one case form marking topical non-subjects;
(v) one locative case covering all of direction (‘to’), location (‘in, at’), and source (‘from’);
(vi) verb compounding, or contiguous verb serialization, to express aspectual meanings and changing valency;
(vii) numerous identical formations, e.g. ‘father of goods’ = ‘rich man’.

None of these properties is restricted to Mesoamerica or to the Vaupés area. The way in which they co-occur is area specific. Similarly, none of the properties given for mainland South-East Asia as a linguistic area (see Matisoff 2001; Enfield 2001, 2005) is unique. It is the way they go together—and correlate with areal patterns of grammaticalization—that accounts for the existence of a ‘pan-South-East Asian’ area (see §2.1.2 of Chapter 9). The same applies to numerous other areas, including the Balkans—the first linguistic area ever to be recognized by linguists. A list of most salient ‘Balkanisms’ is in §5 of Chapter 8. (Also see Sherzer 1976, Mithun 1999, and Beck 2000, for other areas.)

The more areally defining features a language has, the more central it is to the area. The fewer features it has, the more ‘peripheral’ it is. Hup is more
central to the Vaupés diffusion area than Dâw, from the same Nadahup (Makú) family (Chapter 11). South Slavic is the central member of the Balkan linguistic area—as Victor Friedman put it, ‘it is precisely on current South Slavic and adjacent territory that features spread and diminish’ (§7 of Chapter 8).

A larger area may consist of micro-areas; and various layers of areal diffusion may superimpose onto one another. Micro-areas within the larger Volta Basin and the Sudanic Belt areas suggest that areas themselves may be diachronically layered, with traits differing in terms of their timing, speed of spread, and resistance to contact (see §2 of Chapter 3). 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. And it may well turn out that each area consists of micro-areas (see discussion in Chapter 8). A proper typology of linguistic areas is still in its infancy, due to the lack of sufficient number of in-depth historical descriptions.

In most linguistic areas, speakers of all languages share cultural traits. However, shared culture does not imply the existence of a linguistic area. A necessary condition for a linguistic area is some degree of bi- and/or multilingualism. The Great Plains in North America has been recognized as a cultural area, but not as a linguistic area—the languages of the area did not have a long enough time to develop areal traits (Sherzer 1973; Bright and Sherzer 1976: 235). Bilingualism was almost non-existent there (Douglas Parks, p.c.) (see §4.2.1 below).

Linguistic areas involve two or more languages. Diffusion within an area can be unilateral and unidirectional (that is, from one language to the other), or multilateral and multidirectional (from multiple sources). Evenki has undergone unilateral influence from Russian (Grenoble 2000). In contrast, Basque has been influenced by a variety of surrounding Romance languages (Haase 1992; and Chapter 5). In each case, the source of diffusion can only be established if we have access to the relevant synchronic data and linguistic reconstructions.

Languages which have never been in contact or never formed a linguistic area can share properties if they have borrowed features independently from the same or similar sources. This was probably the case for numerous Ethio-Semitic languages which share similar features, each taken from different Cushitic languages (Tosco 2000).

A major problem with ‘layered’ languages spoken within the context of long-standing linguistic areas is disentangling the effects of recent contact from the impact of long-standing diffusion areas which themselves may have
consisted of varied micro-areas. Diffusional impacts themselves are prone to be layered and intertwined. At least three overlapping ‘layers’ of diffusion can be identified within East Timor as a linguistic area: that between Tetun Dili and Mambae as part of a long-standing contact domain; that between Tetun Dili and Malay (and, more recently, Indonesian); and between Tetun Dili and Portuguese (Chapter 6). These account for multiple motivations for many grammatical changes. Further examples from this volume include: Tariana and Hup within the Vaupés area; the impact of the older ‘Sudanic belt’ area on Belanda Bor and Bviri, Luwo and Dinka, and Labwor and Karamojong interactions; the impact of the ‘Volta Basin’ as an old area on the effects of contact between Likpe and Ewe (and also Akan). Tai and Miao-Yao-like structures are recognizable in Cantonese as indicative of old diffusion; the story is complicated by the general impact of South-East Asian diffusional features. Languages of the Balkans present a most complex array of ‘layering’. And the recent contact itself can be either ongoing, as in Tariana, or completed, as in the Nilotic languages discussed by Storch (Chapter 3).

3 Contact-induced change and its mechanisms

3.1 Which grammatical features can be borrowed?

Languages borrow forms and patterns. Borrowed forms may include a lexeme, a pronoun, an affix, a phoneme or intonation pattern, or a way of framing discourse (see Campbell 1997; Curnow 2001). Borrowing patterns does not presuppose borrowing forms. Languages in the Vaupés area share patterns, but have hardly any loan morphemes.

Chapters in the volume provide examples of diffusional impact in just about every area of the language.

Phonological features include nasalization as a word-level prosody, alternation between alveolar stop and flap intervocally and change of a palatal approximant into a palatalized stop in word-initial position, and restrictions on the word-initial position in Hup (§3 of Chapter 11), tone and pitch accent in Hup (§3 of Chapter 11), Cantonese (Chapter 9), and Tariana (Aikhenvald 2002); also see Nurse and Hinnnebusch (1993), on the loss of vowel length in some North-East Coast Bantu languages in contact with Swahili. Diffusion of these features occurred independently from lexical loans.

New phonemes in Amuesha (§7 of Chapter 12) may have made their way into the language through reanalysis of lexical loans, as did the bilabial nasal in Basque (Trask 1998). Developing clitics and bound pronominal forms are an areally spread pattern within the Australian area (Dixon, Chapter 2). And partial decliticization of prepositional proclitics in Israeli Hebrew is a recent
phenomenon associated with the influence of ‘Standard Average European’
prepositional structures (Ghil’ad Zuckermann, p.c.). Diffusion affects seg-
mental units (e.g. allophones, and phonemes), phonological processes, and
the structure of a higher phonological unit, word.

Diffused nominal categories include noun classification. Hup is de-
veloping a totally new system of classifiers in multiple environments under the
influence of Tucano (§4.2 of Chapter 11), while Cantonese displays a system of
classifiers in possessive constructions which shares striking similarities
with Miao-Yao languages (§3.3 of Chapter 9). Number systems and number
marking have been restructured under areal influence in Western Nilotic,
Hup (§4.4 of Chapter 11), and Likpe. In Basque, contact with Spanish has
enhanced the spread of a pronominal plural marker to most pronouns (§2.2
of Chapter 5). Both Hup and Tariana developed a typologically unusual
system of core cases whereby a definite non-subject acquires a special mark-
ing; and one catch-all locative case (§4.8 of Chapter 11 and §5.2–5.3 of Chapter
10). The category of nominal past, prominent in Carib languages, made its
way into Mawayana (§4.2 of Chapter 13).

Verbal categories include evidentials—as in Tariana (Chapter 10), and
in Hup (§4.5–4.6 of Chapter 11)—modalities—such as frustrative in
Mawayana (§4.4 of Chapter 13), optative and apprehensive in Hup, and
apprehensive in Amuesha (§8.2.2 of Chapter 12)—tense and aspect (Hup
(§4.6 of Chapter 11), Basque (§§2.4.2–3 of Chapter 5)), and verb compounding
to express an array of aspectual, valency and other meanings, as in Hup
(§4.7 of Chapter 11). Verbal negation in Hup also closely resembles the Tucano
‘prototype’ (§4.9 of Chapter 11), and negation in Amuesha is much more
similar to that in Quechua than to other languages of the Arawak family
§8.2.1 of Chapter 12).

Diffused syntactic features cover both phrase-level and clause- and
sentence-level syntax. The argument structure and marking of some verbs in
Basque bears the impact of Romance languages (§2.3.3 of Chapter 5; also see §4.1
of Chapter 13 on the verb ‘say’). Along similar lines, the usage of locative cases
and argument structure in Tigak (Jenkins 2000: 249–50) is changing to match
the pattern of the dominant Tok Pisin. In traditional Evenki (Tungusic), the
agent of the passive was marked with dative case; under Russian influence, it is
now frequently marked with instrumental (Grenoble 2000: 109–10). In Karaim
(Turkic), a construction employing the postposition ‘with’ is used to express
the meaning of ‘be in the function of’, under the influence of the Russian
instrumental case used with exactly the same meaning (Csató 2001: 274).

Clausal constituent order is highly susceptible to diffusion. Hup and
Tariana are becoming verb final under Tucanoan influence (see §4.9 of
Chapter 11 and Aikhenvald 2002; further examples are provided by Dimmen-daal 2001; Tosco 2000; and Heine and Kuteva 2003, 2005). The development of verb-initial structures in Tetun Dili is associated with Portuguese impact (Chapter 6). Borrowed clause types include postposed relative clauses in Basque (§2.3.2 of Chapter 5) and new ‘modal’ clause types and complementation in Likpe (§4.4 of Chapter 4). Hypotaxis in Tetun Dili is also ‘foreign’—it is largely attributable to influence from Portuguese (§3.2.5 in Chapter 6).

**Diffusion of discourse structures** and their marking includes the head-tail structure of clause sequencing in discourse (as in Hup: §5 of Chapter 11), and spread of numerous discourse particles, as in Likpe (§6 of Chapter 4), in Pennsylvania German, and other German varieties in North America (§3 of Chapter 7; also see King 1999: 109–10; Matras 1998). Throughout the world, clefting as a focus-marking device is often diffused from one language to another (as in Baniwa, an Arawak language from north-western Brazil, where a cleft construction has developed under the influence of Portuguese).

Discourse formulae and the ways of telling stories are often shared if languages are in contact—striking examples come from Basque (§2.5 of Chapter 5), Likpe (§6 of Chapter 4), and Hup (§5 of Chapter 11); also see Haig (2001). This is directly linked to the **diffusion of pragmatic patterns, and types of contexts**. Linguistic communities in contact come to share speech genres, narrative organization, means of marking speech reports, and other ‘ways of saying things’.

The more culturally important the pattern is, the more it is diffusible. Triadic communication patterns throughout West Africa—whereby information is reported to a second person through a necessary intermediary—can be held responsible for shared patterns of speech report and for the emergence of logophoric pronouns (Ameka 2004). As a result of contact with Hopi, Arizona Tewa acquired a number of traditional speech genres and ways of marking them, such as the use of an evidential particle: these are absent from Tewa varieties outside the contact zone (Kroskrity 1998). Similar examples come from Jenkins (2000: 66, 255), Haig (2001), and Johanson (2002).

**Diffusion of semantic patterns, lexical calques, and identical derivations** abounds in Hup (§5 of Chapter 11), Likpe (§6 of Chapter 4), and Basque (Chapter 5). In each case the absence of a particular pattern in a closely related language is an indicator of its areal origin. For a speaker of Nigerian Arabic ‘head of house’ means ‘roof’, as it would in many of the languages not related to Arabic but spoken in the same location, around Lake Chad. For a speaker of any other Arabic variety the same combination would mean ‘head of the household’. This is because Nigerian Arabic borrowed patterns—but not so much forms—from its neighbours (Owens 1996: 82–3;
also see Dimmendaal 2001: 363 and Thurston 1987, for similar examples from other areas). An example of an identical pan-European derivation is the word for ‘skyscraper’ in French, Portuguese, and Russian.

All, or some, of these can take place simultaneously. The effect of each of them may be complicated by language engineering, and multiple causation—as in Irish English, where the influence of the ‘source’ language simply helped ‘activate’ what the language already had (see §2.3 above).

3.2 What changes in language contact

In terms of the overall impact on the language, diffusion may involve contact-induced gain, or loss, of a form, or of a pattern. The original and the diffused form, or pattern, can coexist in the language, with—or without—some functional differentiation. Or a hybrid form may be created.

We distinguish:

(I) Borrowing of a grammatical system. The Australian language Yanyuwa developed a system of noun-classes in imitation of its westerly neighbours, which had such a system, creating the actual forms from the borrowing language’s own resources (Dixon 2002: 500–1). Similarly, Hup developed a system of evidentials matching the one in Tucano (§4.5 of Chapter 11).

Or a language can lose a grammatical system in language contact. Hône has lost the Benue-Congo noun-class-cum-number marking system as a result of contact (Storch 2003: 183). Loss of patterns may imply loss of forms: some Oceanic languages in the New Guinea area lost their possessive classifiers under the influence of surrounding Papuan languages (Lynch, Ross, and Crowley 2003). Others ‘generalized’ one classifier at the expense of others which were lost. Tangale, a Chadic language, lost gender distinctions as a result of contact with Adamawa (Jungraithmayr 1995: 200–1), generalizing the ‘feminine’ form. Along similar lines, the loss of gender in Arawak languages Mawayana (§5 of Chapter 13), Amuesha, and perhaps Chamicuro (§8.2 of Chapter 12 and Aikhenvald 1999b) is, in all likelihood, due to impact from languages with no gender distinctions. The loss of a pattern thus involved the loss of some forms, and reinterpretation of others.

Alternatively, a grammatical system becomes severely eroded as a result of contact: the influx of conveniently compact monomorphemic verbs from Portuguese into Tetun Dili played some part in a reduction in productivity for serial verb constructions (§3.2.5 of Chapter 6).

Only occasionally can a whole subsystem of forms be borrowed. Ayacucho Quechua and Tagalog have adopted the subsystem of Spanish gender marking and agreement—but these borrowed systems are fairly marginal in that they
involve a limited set of items. Instances of wholesale borrowing of Arabic numbers have been reported in some Berber languages (Aikhenvald and Militarev 1991). An influx of loan adjectives into Tetun Dili has resulted in developing a new word class. There are no instances of one language borrowing a complete paradigm, say, of pronominal forms, or verbal inflection.

More frequently language contact results in:

(II) Adding a term to an existing system. If one language has a number system consisting of just singular and non-singular while a neighbour has singular, dual, and plural, then the first language may innovate a dual (either by internal grammaticalization, or by borrowing a dual form from the second language, as in Resigaro, an Arawak language influenced by the unrelated Bora-Witoto: Aikhenvald 2001). We may also get loss of a term: if one language in a region has a dual category but this is lacking from all its neighbours, then there may be diffusional pressure to lose the dual. That is, the system gets reduced or expanded without being restructured. Mawayana has borrowed a first person exclusive pronoun from Waiwai, in an attempt to fill a perceived gap in the system (§4.1 of Chapter 13). Cantonese innovated a proximal demonstrative morpheme, possibly from a Tai-Kadai source (§1 of Chapter 1). And Yidiny has borrowed a first person pronoun œali ‘any two people, one of them me’ from Dyirbal (Dixon 2002: 286–7).

Contact-induced changes may involve significant restructuring of a grammatical system, changing the language’s typological profile. As a result of such system-altering changes a head-marking language may develop dependent marking—as did Tariana and Hup, under the East Tucanoan influence. Sri Lankan Portuguese has undergone a similar change of its overall typological profile—it has acquired core case markers and become more synthetic under Tamil influence (Bakker 2000, 2005). In contrast, Basque and Israeli Hebrew are becoming more analytic under Indo-European influence: while it can be argued that a certain analytic tendency was already there, there is no doubt that this was speeded up and enhanced by the contact.

* In contrast, it is not uncommon to have paradigms restructured and new ones developed out of the language’s own resources in a situation of language contact. Individual pronominal forms or parts of a paradigm can be borrowed (see further on, on Mawayana): for instance, the English they, their, them were borrowed from Scandinavian, replacing the Old English forms hie, hiera, him. Two independent singular personal pronouns in Miskito (‘I’ and ‘you’) were borrowed from Northern Sumu (with the third person singular pronoun originating from a demonstrative). Kambot, an isolate from the Sepik area of New Guinea, is said to have borrowed some pronominal forms from Iatmul, a neighbouring Ndu language (these forms are first singular, second singular feminine, first plural, and possibly also third singular feminine: Foley 1986: 210–11). Resigaro (Arawak: Aikhenvald 2001: 185) borrowed one bound and one free pronoun from Bora. Daiso, a Bantu language, borrowed a first person plural prefix from the neighbouring Shambala (Nurse 2000: 59). See Campbell (1997: 340), for other examples from North American Indian and South-East Asian languages.
Further system-altering changes involve case-marking patterns. The erstwhile split ergative case-marking system in Ardes¸en Laz became nominative-accusative under the influence of Turkish (Haig 2001: 215). Estonian (Raag 1998: 57) is thought to have developed prepositions (which now coexist with postpositions) under the influence of Indo-European languages. Tariana (Chapter 10) developed an unusual system of marking topical objects and focused subjects under the impact of Tucanoan languages. Hup, spoken in the same area, developed similar object-marking devices (Chapter 11).

A spectacular example of system-altering contact-induced change comes from the morphology of Semelai, an Aslian language. The only indigenous morphological processes involve the ‘non-concatenative’ system: affixes are attached to the left edge of the word as prefixes or as infixes depending on the number of syllables in the word. So, the comparative marker ra? is prefixed to a monosyllabic root, as in sey ‘be thin’ versus ra?-sey ‘be thinner’. If a root has two syllables it is infixed, as in jl@Œ ‘be long’ versus jo-ra?-l@Œ ‘be longer’. Semelai borrowed a variety of suffixes, prefixes, and circumfixes from Malay, and thus acquired a whole new concatenative morphological system as a result of intensive contact. ‘Light syllable’ reduplication has also been borrowed from Malay; nowadays, all these processes apply to roots of Semelai and also of Malay origin (Kruspe 2004: 64–9, 81–5).9

In contrast, system-preserving changes do not involve creating any new categories. They may involve partly or fully replacing an already existing category or form: for instance, Ingrian Finnish borrowed a past tense marker from Estonian (Riionheimo 2002: 201–2). The borrowed marker tends to be in complementary distribution with the original one (depending on the phonology of the verb stem). Or a new term can be added to an already existing category—Semelai borrowed half a dozen numeral classifiers from Malay, complementing the indigenous classifier system (Kruspe 2004: 206–8); see further examples in Aikhenvald (2000: 386–8).

A language contact situation may simply not last long enough for a system to be restructured—as was the case in the Luwo and Dinka interaction (see §3 of Chapter 3). The impact of Karamojong ‘gender’ markers into Labwor (§4.2 of Chapter 3) did not introduce any new system-shattering gender distinctions—the borrowed morphemes were reinterpreted as number markers and thus integrated into the number system already in place.

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9 The very idea of such restructuring and concomitant system-altering changes goes against the oft-quoted ‘structural compatibility requirement’. In its strong form, this states that borrowing can operate only between similar systems (see e.g. Moravcsik 1978 and Weinreich 1953: 25). This claim holds only as a tendency (see Harris and Campbell 1995; Haig 2001).
The distinction between system-altering and system-preserving changes
is hardly watertight. Contact-induced changes may result in creating a new,
somewhat marginal, subsystem within a language, without affecting the ‘core’.
This is often the effect of an influx of loans. Unassimilated loans are likely
to produce ‘loan phonology’, much in the spirit of the ‘coexistent phonemic
systems’ discussed by Fries and Pike (1949). Loans then stand out as phono-
logically different from the rest: the very sound dż in the Russian word dżungli
‘jungle’ (borrowed from English) betrays its foreign origin. Borrowed morpho-
logical markers or processes—such as Latinate plurals in English, Hebrew
plurals in Yiddish, or Cushitic gender-marking derivational suffixes in the
 genetically unrelated Ongota (Sava 2002)—may also apply just to loans, thus
creating a ‘loan morphology,’ as in Tetun Dili.

A change may be system altering to varying extents, often depending on
speakers’ speech style. Some speakers of English make a point of pronoun-
cing French-style nasalized vowels in words like croissant, to sound ‘posh’.
This choice involves adding a term to the phonological system, for stylistic
reasons.

In the long run, a loan subsystem may get integrated into the language—
the sound ŋ in Russian used to be part of loan phonology, but since most
loans containing it have now been assimilated, it is now part of the main-
stream phonological system. Words with initial voiced fricatives in English,
such as very, were borrowed from French; their adoption has contributed to
the phonemicization of an already existing allophonic variation between
voiced and voiceless fricatives—having thus set in motion a process of
structural changes in English phonology. Tetun Dili has a loan subsystem of
Portuguese adjectives which are very different from verbs—unlike the native
system where there is no watertight distinction between the two. In the long
run this may result in restructuring the word class system in Tetun Dili.

In terms of their time frame and in their stability, contact-induced changes
can be completed or on-going (or continuous) (Tsitsipis 1998: 34). Com-
pleted changes cover those aspects of the grammatical system of a language
which do not show any synchronic variation. Speakers are hardly aware of
these as ‘foreign’. Alternatively, speakers of one language may have moved into
an area where another language was already spoken. This language had a
‘detectable effect’ upon the new arrival, but the contact is now in the past (this
effect is also known as ‘substratum’ influence). At the time of study there is no
more contact. Amuesha (Chapter 12) provides a prime example of such
‘vestigious’, or ‘prehistoric’, language contact with Quechua. A similar
example is the impact of non-Austronesian Waskia on the Austronesian
On-going or continuous changes are those in progress; here the degree of influence of the other language depends on the speaker’s competence and possibly other, sociolinguistic, variables, such as speakers’ proficiency in the language, as in Tariana.

3.3 How foreign forms and patterns make their way into a language

Once borrowed, a form or a pattern is likely to diverge from what it was in the source language, in terms of its formal adaptation, and also its semantics and function. A form may be simply transferred from one language into another—as the non-first-hand evidential marker -miš was borrowed from Uzbek into Tajik (Soper 1996: 59–61). Loan forms are thought to be introduced via code switching, or parallel use of more than one language. Loans vary in terms of their degree of phonological and morphological integration into the ‘target’ language (see Haugen 1950).

Further mechanisms are:

(I) Enhancement of an already existing feature. If languages in contact share a category or a construction, language contact may increase its frequency or its productivity. Pre-existing analytic tendencies in Basque and Israeli became more pronounced under the influence of Indo-European languages. (Analytic tendencies have been documented for modern Semitic languages—see, for instance, Diakono 1989.) The language-internal tendency towards word-medial constituent order in Israeli was enhanced by the Standard Average European pattern. Contact between English and Pennsylvania German often accelerated a change already in place—such as avoiding the ‘verbal brace’ whereby the non-finite part of a complex verb goes at the very end of a sentence. The same applies to the increased use of the progressive construction, ‘be at doing something’, in Pennsylvania German—English is simply ‘helping along’. Similar examples abound: another example is the ‘get’-passive in Pennsylvania German (§2.3.6 of Chapter 7). This is also known as ‘activation’ (see Clark 1994: 118, on how Outlier Polynesian languages in contact with non-Polynesian languages use possessive suffixes much more often than their Polynesian relatives).

Conversely, a structure which is atypical for those languages with which the target language is in contact becomes marginalized. As a result of contact with English, the requirement for verb-final order in subordinate clauses in Pennsylvania German became more relaxed (Kate Burridge, p.c.). The typical Semitic consonantal root is weakened in Israeli Hebrew, and the erstwhile proclitic prepositions lose some of their clitic properties—all this due to the influence of Yiddish and other Indo-European languages (Zuckermann 2003).
(II) **Extension by analogy.** An existing structure can develop additional meanings, matching the ones in a contact language: this is why pronominal plural in Basque was extended to all pronouns, to match the Spanish pattern, and verb compounding in Hup came to be used in a variety of Tucano-like meanings. Serial verbs in Likpe expanded in their use due to a strong presence of serial verbs throughout the area (see §5 of Chapter 4).

Many speakers of Basque do not distinguish between direct and indirect object in verb morphology, matching Romance languages (§2.3.3 of Chapter 5). In Hup, a single form is used to mark a verbal reflexive and emphasis with nouns, matching the polysemous pattern in Tucano (§4.9 of Chapter 11).

(III) **Reinterpretation and reanalysis.** These may involve borrowing words and reanalysing the morphemes. In the Frasheriote Aromanian dialect of Gorna Belica, the marker -ka of the Albanian third singular admirative has been reanalysed as an evidential particle -ka which is suffixed to indigenous participle forms (Friedman 2003: 190). This can be limited to loans only, as in Tetun Dili (Chapter 6). Or the reanalysed material can then be used with native as well as foreign forms, as in Israeli Hebrew. Other examples include the replacement of the fricative f by a labial stop and loss of vowel length in Tajik under Turkic influence, which must have started from loans and then expanded into native words (Windfuhr 1990: 543–4). Reduplication and prefixation in Semelai started from reanalysing Malay loans, and then spread to the native lexicon.

A borrowed bound morpheme, reanalysed and reinterpreted, may acquire a quite different meaning in the target language: gender markers were borrowed from Karamojong and Teso-Turkana into Labwor and became exponents of number, thus fitting into the pre-existing system (§4.2 of Chapter 3). Or a borrowed lexical item can be reanalysed so as to replace a grammatical morpheme. In Acadian French the English loan back ‘takes on the role of the French prefix re- with verbs such as revenir “to come back”, as in venir back (ot back venir), arriver back, mettre back’ (King 1999: 116–25).

Reanalysis and reinterpretation of native material does not have to involve borrowed forms: passive and relative clauses in Basque were reinterpreted to fit in with a Romance prototype using the language’s own devices. The Israeli intransitive possessive construction with the existential verb is developing into a transitive structure reminiscent of Germanic ‘have’ (Ghil’ad Zuckermann, p.c.).

(IV) **Areally induced grammaticalization.** This is a process whereby a lexical item is grammaticalized to express a category or a meaning in a target language. The basic paths are: **(a)** The target language follows the same
grammaticalization path as the influencing language (partly subsumed under ‘replica grammaticalization’ in Heine and Kuteva 2005). The verbs ‘go’ and ‘carry’ in Basque (§2.4.2–3 of Chapter 5) developed the same aspectual meanings as the corresponding verbs in Spanish. Some Likpe postpositions grammaticalized from the same source as those in Ewe, e.g. ‘above’ from ‘sky’ or ‘inside’ from ‘stomach’ (Felix Ameka, p.c.).

(b) Alternatively, grammaticalizing a lexical item to create a new category matching the one in the influencing language, without following the exact same grammaticalization path. The verb ‘hear’ evolved into a non-visual evidential in Hup and in Tariana, to match a corresponding distinction in Tucano (whose non-visual evidential does not derive from such a verb). Classifiers in Hup are grammaticalized plant parts; the noun ‘wood, stick’ grammaticalized into a general nominalizer, and then into a future marker. In both cases, the resulting categories match the ones found in Tucano; but the grammaticalization paths are special to Hup (see §4.6 of Chapter 11).

(V) Grammatical accommodation. This process involves a change in meaning of a morphological marker or a syntactic construction based on superficial segmental similarity with a marker or a construction in a different language. That is, a native morpheme can be reinterpreted on the model of the syntactic function of a phonetically similar morpheme in the source language. The marker of possession -pal in Pipil, a Uto-Aztecan language (Campbell 1987: 263–4), was originally a relational noun, as in mu-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’ and is used to introduce a subordinate clause.

Present progressive aspect in Likpe is expressed with a periphrastic construction consisting of the verb lē ‘hold’ and a nominalized verb. This construction evolved under the influence of the Ewe present progressive marked with a lookalike form lē ‘be at:present’ in Likpe (pronounced as lē in the Ewe dialects geographically close to Likpe). This is another example of grammatical accommodation (see §4.3 of Chapter 4).

A similar example comes from Hup (§4.5 and n. 9 of Chapter 11): here an inferred evidential construction developed to match a Tucano structure, and using a lookalike form ni (see Aikhenvald 2002: 128, on a strikingly similar phenomenon in Tariana).

(VI) Loan translations. These involve mostly adhoc word-for-word or morpheme-per-morpheme translations from one language into another—examples include Hup numerals, verb-noun combinations in Israeli Hebrew, motion-cum-purpose constructions in Likpe, and numerous pragmatic formulae.
including greetings in Basque—see Table 6 in Chapter 5. Another striking example comes from Mawayana (§4.2 of Chapter 13) where the nominal past -ba ‘translates’ morphemes meaning ‘dead’ and ‘former’ in two contact languages—Waiwai and Trio. Along similar lines, many of the preverb-verb combinations in Estonian arose as morpheme-per-morpheme translations from German (e.g. Estonian läbi-hammustama, German durch-bissen (through-bite) ‘bite through’, Estonian välja-kannatama, German aus-halten (out-hold) ‘tolerate, bear’. Nau 1995: 92–3). The calquing may start from ‘nonce’ calques (similar to one-off borrowings), which may at first be perceived as mistakes. For instance, speakers of Manambu (a Ndu language from New Guinea) occasionally, in their English, use the preposition for with the verb ‘fear’, calquing Manambu argument marking (the verb ‘fear’ in Manambu requires the dative case on a following noun). The more often it gets corrected, the less chance this calque has of becoming part of the New Guinea variety of English. As Bunte and Kendall (1981) have shown, an error is not an error any more, when it becomes part of an established variety.

Why do only some and not all structures get ‘translated’? This is motivated by their correlation with salient cultural practices, perceived ‘gaps’, and sheer frequency. This is the topic of §4.1.

(VII) Lexical/grammatical parallelism. This involves native and borrowed grammatical forms appearing together, as illustrated by Hajek (example 5 in §3.2.3 of Chapter 6) for Tetun Dili. Portuguese forms are in italic:

(1) *durante Agustu* nia laran
    during August 3sg inside
    during August

This ‘parallel use’ is a means of allowing foreign constructions to make their way into the language, in a situation which appears to disfavour downright expansion of recognizable foreign, Portuguese-only, structures.

The relative ‘age’ of each grammatical change and their relative chronology is another issue to be investigated in depth for each contact situation. Areally induced grammaticalizations with clearly identifiable origins are assumed to be relatively recent: the older the change, the more opaque the boundaries, and the more difficult it is to establish the semantic links. Bviri, a Ubangian language, must have acquired prefixes through areal diffusion before its contact with Belanda Bor, a Western Nilotic; some such prefixes and marking singular-plural pairs were subsequently borrowed into Belanda Bor (see Chapter 3, and also Storch 2003, for a discussion of different chronological layers of areal diffusional phenomena recognizable in Höne, a Jukunoid
Benue-Congo language). Pre-existence of prefixal slots facilitated further convergence in language structures. This brings us to the next section.

4 Making diffusion possible

We cannot predict with full assurance which way a language will change. Nor can we postulate universal ‘constraints’ on language change. We can, however, determine which changes are more likely—and which are less likely—to occur under particular circumstances. The same applies to ‘borrowability’ of linguistic features (cf. Thomason 2000). An exception can be found to just about any restriction or constraint on borrowing. But some kinds of morphemes are borrowed more often than others. For example, there are more instances of borrowing word-class-changing derivational morphemes than there are of bound pronouns and inflections. Yet, Meillet’s (1948: 87) categorical statement that an inflection can never be borrowed is incorrect (see Gardani 2005, for a summary of exceptions).

We may admit that ‘as far as strictly linguistic possibilities go, any linguistic features can be transferred from any language to any other language’ (Thomason and Kaufman 1988: 14), and then ‘content ourselves with sitting back and watching how languages change syntactically and semantically according to their own inner, inscrutable laws’ (Matisoff 1991: 447). I propose a more positive route. Diffusion of grammatical forms and patterns will be viewed in terms of a variety of facilitating factors or preferences. We discuss these in §4.1. Then, in §4.2, we turn to sociolinguistic and cultural parameters relevant for diffusion of grammar.

4.1 Linguistic factors facilitating diffusion

Several linguistic factors facilitate diffusion of forms, and of patterns. Some of these here have been overtly identified by Heath (1978); and a few others correlate with tendencies in grammatical borrowing (e.g. Moravcsik 1978; Matras 1998, 2000; Dalton-Puffer 1996: 222–5).

1. Pragmatic salience of a construction: the more pragmatically motivated, the more diffusible. Constructions used for marking pragmatic functions of constituents—focus, topic, backgrounding, and foregrounding—are the easiest to diffuse. Examples include the spread of passive as a way of focusing on a participant (see Blake 2001; Enfield 2001; and Li and Thompson 1981: 496–7). Similar examples come from Hup (§4.9 of Chapter 11), and from Basque (§2.3.1 of Chapter 5). The order of clausal
constituents also typically correlates with discourse functions of arguments, and is highly diffusible.

Along similar lines, Yaron Matras (2002: 212) suggests that the categories which are least resistant to contact-induced change include discourse markers, fillers, and interjections. In contrast, stable categories resistant to borrowing are those that ‘capture the internal structure of meaning’ including deictics, case markers, and tenses. The semantic and pragmatic profile of borrowable categories provides evidence for cognitive motivation for contact-induced change, as an overall tendency for the languages in contact to have similar and compatible pragmatic organization.

Discourse organization patterns and various discourse formulae appear shared in most situations of ongoing contact described throughout the volume: Hup, Likpe, Mawayana, Pennsylvania German, and Basque. This is directly linked to Factors 2, 3, 4, 5, and 6.

2. Matching genres. This involves sharing pragmatic patterns and types of context and subsequent diffusion of organizing discourse structures, resulting in common genres, idiomatic expressions, and further ways of saying. Examples of calquing of greetings, and calquing or downright borrowing of discourse markers, abound throughout the volume (also see Matras 1998; Brody 1995). Kroskrity (1998) demonstrated striking parallelism in the surface structure of stories of similar genres in Tewa and Hopi, spoken in the same area in Arizona, and notably absent from Tewa spoken outside the area.

The spread of noun class prefixes throughout the Australian languages of Arnhem land is facilitated by their ‘usefulness’ in discourse (Heath 1978: 116): a referent can be mentioned just by using an appropriate noun class marker. That is, matching discourse structures and referent-tracking techniques necessarily involve diffusion of noun classes.

The outcome is convergence in organizing the text ‘from top to bottom’, covering larger discourse units, and clause and sentence structures (Stolz and Stolz 1996; Matras 1998; Haig 2001). This is corroborated by diffusibility of switch-reference systems, and marking of subordination and coordination (Stolz and Stolz 1996; Matras 1998; Mithun 1992a). Turkic-type clause-chaining structures have made their way into neighbouring Iranian languages (Soper 1996; Perry 1979; Johanson 2002).

The matching of discourse and pragmatic organization correlates with narrating events and communicating in compatible ways. This entails convergence in marking participants. Hence the diffusibility of patterns of marking grammatical relations, and argument structure (see Mithun 2000, Fortescue 1997, and Dixon 1994, on the diffusibility of ergative-absolutive and
nominative-accusative, and also marked nominative patterns). Meanings of individual cases and adpositions are easily calqued from one language to another. Haase (1992: 67–70) provides numerous instances of how the instrumental case is being replaced by comitative in Basque, under Romance influence (also see Chapter 5); further examples can be found in Liivaku (1993), for Estonian; Nau (1995), for Finnish, and Grenoble (2000), for Evenki.

Similar situations are conceptualized in similar ways and warrant similar verbal description. If one language uses serial verbs for describing a complex of subevents as one event, the other language is likely to evolve a verb-sequencing construction to match this, as did Hup, to match the Tucano ‘prototype’ (§4.9 of Chapter 11). Semantically similar verbs are likely to follow similar grammaticalization paths in languages in contact, as shown by Matthews (§2.1.2 of Chapter 9) and Burridge (§2.3.3 of Chapter 7); also see Enfield (2001) on shared grammaticalization patterns of the verb ‘acquire’ throughout mainland South-East Asia.

Borrowing a genre may directly correlate with replicating the surface realization of a category. Multiple occurrences of the evidential particle as token of Arizona Tewa traditional stories are shared with the unrelated Hopi spoken in the same area; both the genre, and the multiple occurrence of the evidential, result from language contact (Kroskrity 1993: 144–63; 1998: 27–8). This takes us to Factor 3.

3. **Tendency to achieve word-for-word and morpheme-per-morpheme intertranslatability.** This is a corollary of Factor 2. Languages in contact, especially those with a high degree of bilingualism, will often come to have matching discourse patterns, and intonation unit contours. The structure of clauses, phrases, and, further on, phonological words is also expected to become similar.

If phonological word coincides with grammatical word, we expect converging languages to have the same word structure. Stress and tone are a salient property of phonological words, and—in some languages—syllables; hence their ‘prone-ness’ to diffusion. Hup and Tucano came to share restrictions on word-initial boundaries. One catch-all locative case in Tariana and Hup ensures morpheme-per-morpheme intratranslatability of nominal forms from these languages into Tucanoan. Within Australia, the development of bound pronouns out of free pronouns which become obligatory, then cliticize to the verb, and then even fuse with it, is determined by the principle: ‘be as iconic with your neighbour as you can’ (§7 of Chapter 2). The spread of analytic verbal forms in Basque (§2 of Chapter 5) allows Basque speakers to ‘match’ them with their Spanish equivalents (also see Factors 7 and 8 below).
Frequency: the more frequent the category in one language, the likelier it is to diffuse into another. This is congruent with Du Bois’s (1985: 363): ‘Grammars code best what speakers do most.’ The frequency of serial verb constructions accounts for their spread into Tariana and into Hup from Tucanoan languages (Aikhenvald 1999c and §4.7 of Chapter 11), as well as throughout the Volta Basin. Frequency played a role in the integration of borrowed French derivational morphology into Middle English (Dalton-Puffer 1996: 224–5), and of Italian derivations into Maltese (Tosco 1996). And it comes as no surprise that high-frequency verbs in Mawayana—especially the verb ‘say’—bear more contact-induced impact than other verbs (§4.1 of Chapter 13). And see Trudgill (2004: 159), on the role of frequency in the spread of phonetic patterns in the formation of dialects of English. Frequency often correlates with obligatoriness of a category or a meaning, and this takes us to Factor 5.

The more impact a category has on cultural conventions, the more diffusible it is expected to be. An obligatory category in a language which correlates with behavioural requirements is more susceptible to diffusion than one which does not. Such a category is also salient in terms of its frequency in texts of varied genres. The existence of obligatory evidentials presupposes explicit statement about how one knows things. Those who are not explicit run the danger of being treated as liars, or as incompetent. This cultural requirement may explain why evidentiality spreads so easily into contact languages, including some varieties of American Indian English (Bunte and Kendall 1981), Latin American Spanish (Laprade 1981), and Amazonian Portuguese (Aikhenvald 2002), and diffuses across linguistic areas. Evidentiality made its way from Carib languages into Mawayana (Eithne Carlin, p.c.), and from Tucanoan independently into Hup and Tariana (§4.5 of Chapter 11 and Aikhenvald 2002). And a reported evidential in Amuesha (§8.2 of Chapter 12) could also be due to areal diffusion.

Pennsylvania German abounds in ‘English-inspired’ expressions for future time, involving verbs like ‘plan’, ‘suppose’, and ‘count’ (§2.3.3 and examples (6)–(9) in Chapter 7). According to Burridge, these constructions are expressing a cultural value that is central to the Anabaptist belief system; namely, subordination of individual will to the will of God. The English ‘tentative’ expressions of future time were ‘made-to-measure for a group of speakers reluctant to talk about the future’—as a result, they increased in frequency and became parts of speakers’ routine. A correlation with cultural conventions speeded up a contact-induced change.
Along similar lines, the cultural practice of triadic communication in West African languages (Ameka 2004) could have promoted diffusion of patterns of marking responsibility in discourse.

In small tribal societies, anchored on a classificatory kinship system, kinship terms are a communicatively salient category. The development of suffixal plural on kinship nouns in Likpe out of a third person marker replicating the pattern in Ewe could be conditioned by the special status of kinship terms. The relative diffusability of semantics of noun categorization devices, of types of commands, and of politeness could also be anchored to the spread of the associated cultural conventions.

6. **Borrowing a practice may facilitate borrowing a set of linguistic expressions which correlate with it.** Speakers of languages in contact may share cultural practices, as for instance, building houses and making artefacts. One expects a set of similarly structured expressions to arise for referring to these. The diffusion of the structure of numerals in eastern Anatolia (Haig 2001), and also in Hup and neighbouring languages (§4.3 of Chapter 11) is linked to shared trade and counting practices. Languages which develop trade under contact influence often either borrow or calque numbers.

7. **The existence of a perceivable ‘gap’ facilitates diffusion.** Australian languages had no ‘conventionalised counting systems’, that is, no numbers used for counting (Hale 1975: 295–6). As the Aborigines came in contact with European invaders and their counting practices, this gap was filled either through borrowed forms, or by exploiting native resources. A similar example comes from Likpe (§4.1 of Chapter 4): kinship terms lacked a plural and developed it following a Ewe mould (also see Factor 8 below). Borrowing of the exclusive 1+3 pronoun *amna* into Mawayana from Waiwai fills the existing ‘gap’ in the pronominal system (see §4.1 of Chapter 13). As Carlin (§5, Chapter 13) put it, ‘it was for reasons of “feeling the need” to express the same obligatory categories’ present in Cariban languages that Mawayana had to develop a nominal past. Iroquoian languages have developed coordinating conjunctions out of erstwhile adverbs (Mithun 1992a) to fill a structural gap.

This is linked to Factors 1–6. Borrowing a cultural practice creates a ‘gap’ in the linguistic expression and the necessity to fill it (Factor 6). This tends to be done by matching the expression in the source language. So, speakers of languages with evidentials often ‘feel the need’ to express how they know things in any language they speak; this is an additional factor in diffusibility of evidentials.
A combination of a tendency to fill a gap and to be able to say what your neighbours say similarly to the way they say it (Factors 1–3 above) accounts for the borrowability of conjunctions, and especially the disjunction ‘or’ (cf. e.g. Matras 1998).

8. **Typological naturalness, or an established typological pattern anchored in human cognition, facilitates diffusion of a morpheme or pattern, or development of a category.** Many languages develop future out of a motion verb (see Heine and Kuteva 2002)—so no wonder this is happening in Pennsylvania German, with English ‘helping along’ and accelerating a development which may have eventuated anyway (§2.3.2 of Chapter 7). This is directly linked to the enhancement of pre-existing patterns. The development of an impersonal meaning in third person verb forms is a very common process; it was further enhanced in Pipil by contact with Spanish (Campbell 1987: 277). Plural is more likely to be marked on human nouns and on kinship terms than on nouns of other semantic classes (see Smith-Stark 1974). This typological naturalness was a facilitating factor in the development of number marking on kinship terms in Likpe (§4.1 of Chapter 4). Reduplication is highly likely to be employed as an expressive device, hence its diffusability (see §3.1.2 of Chapter 9). (And also see Dalton-Puffer 1996: 224, for further examples from Middle English.)

If a form or construction develops a new meaning or a new pattern of polysemy under the impact of language contact, the typological naturalness of the newly arising polysemy helps. Examples include the development of interrogative to relative pronoun in Basque; the polysemy of reflexive and ‘emphatic’ (‘self’), and reflexive and emphatic in Hup (matching Tucano), the polysemy of comitative-instrumental and agentive subject marking in Tariana; and the development of reflexive/passive and inchoative polysemy in Israeli Hebrew.

9. **Compactness of expression enhances diffusion,** as in the cases of a ready spread of modal impersonal expressions and their syntax, and compact conjunctions such as ‘so that’ from Ewe to Likpe. One-word causative verbs of Portuguese origin are more compact and easier to handle than multiword causative verb constructions; this helps explain their influx into Tetun Dili. This, alongside other developments, has system-altering consequences: serial verbs in Tetun Dili show signs of gradually losing their productivity (§3.2.5 of Chapter 6). The successful incorporation of the French suffix -able into Middle English was ‘primarily due’ to the fact that Middle English lacked a compact expression for deriving ability adjectives (Dalton-Puffer 1996: 225). Bilingual Navajo easily borrows compact one-word English terms, like ‘shelf’,
rather than using a bulky Navajo-only expression ‘the [thing] into which multiple objects are placed’.

A semantic pattern and a way of mapping it onto a syntactic construction are often borrowed together. Serial verb constructions are a syntactic resource which allows the speaker to express various aspects of a situation as one entity within one clause and with one predicate. Such a cognitive packaging strategy is highly diffusible—as a result, verb serialization is typically a property of a linguistic area, as demonstrated by Ameka (in §5 of Chapter 4).

10. **Pre-existing structural similarity** is conducive to diffusion of both forms and patterns (also see footnote 9, on the ‘structural compatibility requirement’). Cross-linguistically, borrowing is much more frequent between structurally similar systems than otherwise. If languages in contact have similar constructions and patterns, they reinforce each other. A prime example is borrowing prefixes from Karamojong into Labwor: a pre-existing prefixal slot helped make this possible (§4.2 of Chapter 3). Similarly, as serial verb constructions are an areal feature shared by Likpe, Ewe, and Akan, contact with Ewe and Akan reinforced the productivity of serial verbs in Likpe (see §5 of Chapter 4). This is linked to Factors 11 and 12.

11. A form or a pattern is likelier to spread if it fits in with the innovational proclivities of the target language. This tendency can be considered a variant of 10 (and has been alternatively described as system adequacy, whereby the diffused pattern follows the direction the system is going anyway: Dalton-Puffer 1996: 224). The spread of analytic verb forms in Basque reflects the language-internal tendency enhanced by contact with Spanish. An analytic tendency shared by all Modern Semitic languages was enhanced in Israeli Hebrew by its contact with Indo-European languages (Zuckermann 2003).

The lack of pre-existing structural similarities, or the failure of a pattern to follow the innovation possibilities of a language, does not preclude diffusion. Before the contact, neither Tetun Dili and Portuguese, nor Hup and Tucano, had much in common, typologically. Numerous examples of diffusion of categories which are at ‘odds’ with the existing system are given in Harris and Campbell (1995: 123–7); also see Bakker (2000, 2005) on dramatic changes in Sri Lankan Portuguese completely atypical of a Romance language. If the ‘structural compatibility’ requirement had been true, we would hardly be able to expect contact-induced system-altering changes to occur.
12. **Analogy and functional parallelism to an existing form or pattern in a language facilitates diffusion.** Once one construction has been calqued, the calque is likely to extend to similar constructions. Developing Slavic-like aspectual meanings in Yiddish may have started with one prefix, but soon involved all the members of the paradigm (cf. Talmy 1982). The introduction of O-V-V nominalizations in Likpe may have been facilitated by an already existing process of nominalizing a VO structure (§4.2 of Chapter 4).

13. **The existence of a lookalike in a contact language serves as a trigger to developing a similar structure.** The relational noun -\se:l ‘alone’ in Pipil traditionally required possessive prefixes, e.g. nu-\se:l ‘I alone, I by myself’. It has also been remodelled after phonetically similar Spanish solo ‘alone’, and has become an ‘adverb’—no longer requiring a prefix. The form has also shifted its meaning from ‘alone’ to ‘only’, to match the ‘only’ meaning of Spanish solo (Campbell 1987: 263–4). We saw above (§3.3, under (V)) how Likpe developed a present progressive construction under the influence of surface similarity with a progressive in Ewe; also see n. 9 to Chapter 11, on the development of a Tucano-inspired inferred evidential in Hup. Such ‘grammatical accommodation’ was supported by a previously existing structural pattern similar in both languages. Further examples are in Zuckermann (2003) and Aikhenvald (2002). The factors which we have considered so far facilitate diffusion of both forms and patterns. The two are sometimes hard to tease apart, as in the case of grammatical accommodation.

The following factors primarily facilitate the borrowing of forms.

14. **Morphotactic transparency and clarity of morpheme boundaries facilitate the diffusion of a morpheme** (Heath 1978: 105; Aikhenvald 2002: 271; Gardani 2005). Easily separable forms with clear boundaries are more prone to being borrowed than forms involving complex morphophonological alternations. All examples involving borrowing markers of case, aspect, mood, and tense identified by Dawkins (1916) and Heath (1978) involve easily separable morphemes with no fusion on the boundaries (also see Gardani 2005: 67–101 and Matisoff 1991). And calquing transparent constructions is also typical of Basque (§2 of Chapter 5).

The degree of ‘acceptance’ of foreign material has been frequently associated with language type. As Weinreich (1953: 61) put it, ‘a language with many restrictions on the form of words may be proportionately more resistant to outright transfer and favour semantic extension and loan translation instead’ (also see Haugen 1956: 65).

The reason why Mohawk does not borrow verbs is ‘due to the fact that the obligatory affixes on verbs are especially complex’; then, ‘the particular structure
of Mohawk...acts as a restriction impeding the borrowing of foreign words’ (Bonvillain 1978: 32). Along similar lines, no verbs were borrowed from French into any Athabaskan language (Prunet 1990; Krauss MS). A recent study of ‘Bilingual Navajo’ (also known as ‘Boarding School Navajo’) characterized by a large number of English code switches showed a variety of techniques employed to ‘smuggle in’ an English verb: one can use a Navajo ‘make’ with an English ‘main verb’ root as a copula complement; or a Navajo auxiliary with a nominalized English verb as its complement (Schaengold 2004: 52–7).

The fact that, in many languages, verbs are less borrowable than nouns tends to be directly linked to their morphological complexity—see Mifsud (1995) and Field (2001) (and a summary in Curnow 2001). There are no such restrictions concerning borrowing verbs into an isolating language, say, Thai (Tony Diller, p.c.). Borrowed verbs have been documented in many languages—these include Hup, Tetun Dili, Maltese, and Tariana (see § 4.2.2). In contrast, bound verb roots are as borrowable as nouns in Amuesha—showing that a facilitating factor creates a preference and not a ‘law’ (§ 6 of Chapter 12).

15. **Prosodic saliency and syllabicity.** Heath (1978: 105–6) demonstrated that, within the context of Australian languages of Arnhem land, independently pronounceable morphemes are more likely to be diffused than monosyllabic ones. The same applies to the few instances of borrowed forms in Tariana (Aikhenvald 2002: 271).

16. **Unifunctionality and semantic transparency.** Australian languages in Arnhem land show a propensity to borrow unifunctional affixes rather than ‘portmanteau’ ones. Ritharngu borrowed the suffix -kaŋ? from Ngandi -koŋ? to mark the dyadic dual with kinterms (Heath 1978: 91–2, 116). This is not to say that a borrowed morpheme is never polysemous: a polysemous morpheme has a predominant function, and the polysemey is typologically natural, as with the ergative-instrumental case marker borrowed into Ngandi from Ritharngu (Heath 1978: 75–7). These facilitating factors have explanatory power. They help predict what is going to happen, but only up to a point—that is, inasmuch as they allow students of language contact to identify the target points where diffusion is likely to hit. For instance, a cross-linguistically common link between numeral systems and trade patterns, or between evidentials and cultural conventions, make them a likely domain to be first affected by diffusion. Same preferences appear to be at work in dialect contact and the formation of new dialects (see, for instance, Lipski 1994: 45, on the formation of colonial Spanish), helping disentangle the ‘linguistic alchemy’ behind the ‘kaleidoscopic jumble’ of contact-induced phenomena. This topic, fascinating as it is, lies outside the immediate scope of the present chapter.
Several factors are usually at work in each particular instance of identifiable contact-induced change. The post-contact development of a demonstrative into a definite article, and of the numeral ‘one’ into an indefinite article, in Pipil is a typologically natural path (Factor 8) enhanced by the Spanish influence, and by a tendency to match the information structure (Factor 2) and the linear structure of Pipil and Spanish noun phrases (Factor 3). In addition, lack of obligatory definiteness marking could have been perceived as a ‘gap’ (Factor 7). Borrowing the marker of dyadic dual with kinterms into Ritharrngu from Ngandi was a ‘useful’ borrowing (Factors 5 and 7), since it correlated with a culturally salient pattern of dyadic kinship already present in the language (Heath 1978: 116).

The more preferences are at work, the likelier is the pattern to become well established in a language—following a Mutual Reinforcement Principle. Frequency enhances change of any sort: the combination of distant with reported evidential in Hup (highly frequent in traditional narrative) is developing into a fused structure, at odds with the agglutinating tendencies of Hup (and the almost isolating structures in some of its sister languages), but concordant with a fused expression of the same meanings under the same circumstances in Tucano (Epps 2005).

A combination of various facilitating factors is akin to multiple causation in language change. The emergence of the demonstrative ni in Cantonese (§1 of Chapter 9) could have arisen (1) because of a tendency to disambiguate two demonstratives which came to be distinguished by tone only, and/or (2) to fill a gap left by an erstwhile demonstrative becoming specialized as a third person pronoun (Randy LaPolla, p.c.) (Factor 7); its emergence was supported by the typological naturalness of having a proximate demonstrative with a high vowel (Factor 8). Along similar lines, those structures—such as hypotactic syntax—which were shared by Portuguese and written Indonesian to start with (presumably, due to previous contact of Indonesian with European languages) came easily to infiltrate Tetun Dili (see §3.2.5 and n. 3 to Chapter 6). And a number of functional and pragmatic features of Cariban languages made their way into Mawayana through Waiwai, only to be further reinforced by the same features in Trio (Chapter 13). The same principle lies behind what Ameka calls ‘pressure to adopt areal patterns’ in Likpe (§1 of Chapter 4)—a combination of factors which reinforce each other.

The ‘reverse’ of a facilitating factor creates an impediment to a contact-induced change, but does not rule it out. Bound verbal roots are less ‘easy’ to borrow than free forms; yet Amuesha went against this tendency.
Exactly what structure is affected depends on what is available in the languages in contact. In the situation of Estonian-Russian and Evenki-Russian contacts, the change affects some aspects of the usage of nominal cases. The semantics of cases in Basque was affected by Romance prepositions (the Romance contact languages, Spanish and French, do not have cases on nouns). The tendency to create equivalent noun phrases underlies these changes (Factor 2). Strong areal features—that is, the ones that are already found in other places in the area—are among the most resistant ones (Factor 10), e.g. grammaticalization of ‘acquire’ in Cantonese (§2.1.2 and examples 9–12 in Chapter 9) and k-plurals in the Sudanic belt area (§2 of Chapter 3).

Some of the factors identified are intertwined with each other and their effects can be hard to disentangle. Factors 1, 2, 4, 5, 6, and 7 are tightly knit together, and so are Factors 2 and 3; and 10, 11, 12, and 13. Factors 14–16 provide additional motivation for borrowing of forms; and are not immediately linked to any other factors. Factors 8 and 9 provide an overall motivation for linguistic change. There is no hierarchy involved—these factors operate simultaneously.

As a corollary of factors 14–16, isolating and agglutinating languages are expected to be more ‘open’ to borrowed forms than those with fusion. It is easier to borrow a free morpheme than a bound morpheme. However, this does not always hold, when ‘anti-foreign’ language attitudes come into play. This brings us to the next section.

4.2 Sociolinguistic parameters in language contact

No language contact situation is ‘context free’. In each particular case, social and historical environment and culture history create a slightly different social ambience for a language contact situation. The process and the outcomes of language contact depend on a large number of parameters (see Ross 2001; Andersen 1988; Aikhenvald and Dixon 2001b). Those discussed here have been best described in the literature as having particular impact on diffusion.

4.2.1 Degrees of knowledge of each other’s languages (‘lingualism’) and kinds of contact  Crucial factors in understanding types of language contact are whether there is multilingualism or simply bilingualism, involving what proportion of the community, and which social groups. One expects more extensive grammatical borrowing in a situation of stable, well-established multilingualism—as in East Arnhem Land in Australia, or the Vaupés area of Amazonia. Different degrees of ‘lingualism’ can be connected to cultural practices, such as intermarriage, sporadic or seasonal trade, slavery
Knowledge of each other’s languages is a necessary condition for the creation of a linguistic area (§2.5). It is also necessary for the operation of Factors 1–7 above. The impact of a prestigious second language in a predominantly monolingual community typically results in an abundance of loanwords, but hardly any structural influence—English loans in Japanese are a prime example (Loveday 1996).

Relationships between languages and their spheres of use can involve diglossia (see Ferguson 1964; Schiffrin 1998; Fishman 1967; Hudson 2000; Dorian 2002). Diglossic language situations normally involve two (or more) varieties that coexist in a speech community, in complementary distribution between the domains of usage (for example, one used at home, and another in other environments). Long-term stable multilingual situations do not necessarily require diglossic relationships between languages (cf. Appel and Muysken 1987: 5; Smith 1986; Aikhenvald 1996, and many others). The degree of mutual intelligibility between languages within an area may influence the direction of contact-induced change. ‘The odd one out’ considered ‘difficult to learn’ may be in danger of undergoing more diffusional changes than other languages. Kuot, the only non-Austronesian language spoken in New Ireland, has undergone more obvious diffusional impact from the neighbouring Austronesian languages than the other way round (Jenkins 2000 and Lindström 2002).

The degree of ‘lingualism’ is directly linked to kinds of contact with other communities. This can be regular or sporadic. It can occur under a variety of circumstances (e.g. trade, sport, religion, marriage patterns), and at different social levels. Interaction is sometimes restricted to a ritual language, e.g. the influence of Classical Arabic on the vernacular languages of Muslim peoples, exclusively through the Koran. The contact can be stable and prolonged, or short-term and sporadic which may engender discontinuous, one-off changes.11 Contact can be on-going, or completed (this correlates with the

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10 One form of a language may turn out to be better known and thus more influential than another: Lehtiste (1979) showed how translations from Russian influenced the usage of cases, the patterns of negation, and word order within possessive noun phrases in the written form of Estonian during the occupation. Passive constructions in Mandarin Chinese used to convey negative, ‘adverse’ meaning: this construction largely lost this overtone as a result of pervasive translations from Indo-European languages (English and Russian) into Mandarin Chinese (Li and Thompson 1981: 496–7; Chao 1968: 703). Commercial adverts (often influenced by English) may bear more diffusional impact than other genres; this is the case in Spanish and Israeli Hebrew.

11 Here we do not focus on short-term contact-induced changes in immigrant languages which, with almost no exception, result in rapid absorption by the majority language. For comprehensive investigation of these issues, see Clyne (2003).
classification of linguistic changes in §3.2). Completed, or pre-contemporary, contact can produce what is known as substratum influence—as for instance, non-Austronesian influence in the phonology of Madak, an Austronesian language from New Ireland (Ross 1994), or Chukchi influence in the stress system of Sireniki Eskimo (Fortescue 2004). Such contact effect can—but does not have to—be the product of language shift (and subsequent imperfect learning).

Language interaction correlates with the type of community. Communities can be externally open (with plentiful social and economic interaction with their neighbours) as opposed to relatively closed (also see Milroy 1987, on the concept of ‘social networks’). Heath (1981) describes a high degree of shared lexical and grammatical forms and patterns among the various groups of Arnhem land in Australia, resulting from extensive contact (including intermarriage) between small ethnolinguistic groups without hierarchical relations of dominance and in the absence of any strong tribal organization. A fascinating account of how a structural change in the community may entail linguistic change comes from Pennsylvania German (§2.5 of Chapter 7). Traditionally, these communities were small and tightly knit. Unlike the mainstream English-speaking world around, ‘the kind of mandatory speech used to establish social rapport during an encounter is not needed in such an integrated community, where people are deeply involved with one another and where there is no social distance…However, increased dealings with the outside mean the English routines are being adopted,’ especially in newly introduced routines such as phone conversations. As a result, numerous English-style discourse markers have made their way into the language, both as loan forms and as calques.

A community may be ‘externally open’ as a result of traditional warfare. The Matses, a Panoan-speaking group in Peru (Fleck forthcoming), used to raid their neighbours’ villages, killing men and capturing women who would then be incorporated into the Matses community as full-fledged members. These women were first-language speakers of languages other than Matses (some of the same family, some not). Their linguistic integration into the Matses life may have involved a certain amount of foreigner talk, and the variety of Matses they speak to their children may reflect their incomplete knowledge of Matses and the substrata from their own languages. These factors may account for significant grammatical differences between Matses and other Panoan languages.

Alternatively, a community can be internally tightly knit and closed (bound together by linguistic solidarity) as opposed to loosely knit (involving a diversity of language groups) (Andersen 1988; Ross 1994, 1996). In some of
the latter there may be an established lingua franca which can in time lead to the development of a more tightly knit profile. A tightly knit community is expected to be resistant to foreign influences and ‘importations’. The Yaqui, a loosely knit community, are receptive to cultural, as well as lexical and grammatical influence from Spanish, while the more tightly knit Tewa are much less open to Spanish influence of any sort, and the amount of loans and calques is considerably less (Dozier 1956; Kroskrity 1993; also see Voćadlo 1938). This takes us to the next section.

4.2.2 Language attitudes Attitudes towards non-native forms vary, both between communities and within a given community. Some adopt loan forms on a large scale, while others consider using ‘foreign’ importations as tokens of unacceptable language mixing. Speakers of Athabaskan languages preferred not to accept loanwords from the languages with which they had contact but would instead create names for new objects and ideas from their own lexical and grammatical resources (see the insightful discussion of lexical acculturation in Brown 1999).

Different attitudes to external cultural influence among speakers of Iroquoian languages resulted in a different impact of English and French on one aspect of their grammar—namely, clause coordination (Mithun 1992a). The conservative Onondaga have not developed any coordinating conjunctions. The Mohawk—who have a ‘long history of functioning enthusiastically and successfully in both their own culture and that of their non-Indian neighbours’ (Mithun 1992a: 126)—have developed coordinating conjunctions, matching the English prototype. A community can be closed with respect to one kind of influence, and open to the input from another. The Arizona Tewa have resisted influence from Spanish invaders, but not from their traditional neighbour, the Hopi. Stable societal multilingualism in both Hopi and Tewa, enhanced by generations of intermarriage, is characterized by intense indirect diffusion (but very little borrowing of actual forms) and shared discourse patterns (Kroskrity 1998: 32). This also relates to questions of conscious language planning: as when Kemal Atatürk resolved to rid Turkish of its Arabic loans—some of fair antiquity—replacing them with native coinages; however, he did not object to loans from western Indo-European languages.

A cultural inhibition against recognizably foreign items and ensuing linguistic purism provides a mechanism for stopping an influx of borrowed forms. As noted by Herzog (1941: 66), their major property is that they can be ‘traced most readily’, by linguists and speakers alike. Once speakers are conscious of the foreign material in their lexicon—or grammar—they can
try and get rid of it (as happened in the history of various literary languages: Fodor 1984; Tauli 1984; Hint 1996). This is the case in Basque (§3 of Chapter 5), Likpe (§6 of Chapter 4), Tetun Dili (Chapter 6), Tariana (Chapter 10), Hup (Chapter 11), and Mawayana (§5 of Chapter 13). Another, oft-quoted, example of a cultural inhibition against foreign forms is Arizona Tewa, a Kiowa-Tanoan language from North America (Kroskrity 1993; Dozier 1956). The diffusion of patterns is much less controllable.

This is intuitively plausible—as Thurston (1987: 93) put it, ‘since people generally construe languages as being collections of words, it is primarily by lexical form that linguistic groups identify linguistic contrasts among themselves’. In contrast, only a linguist with a penchant for purism is likely to systematically detect unwanted contact-induced structural similarities, as does Mati Hint (1996: 802). He stresses that the major danger for Estonian lies not in the presence of occasional loanwords, which can easily be got rid of, and are therefore a minor ‘trouble’. What ‘distorts’ the language is the rapid expansion of grammatical and lexical calques which are pervasive and, as he admits, more difficult to control than foreign forms.

It is not always an easy matter to draw a line between borrowing forms and borrowing patterns. Once reanalysed, borrowed forms may entail borrowed patterns (cf. Factor 12). The process of ‘grammatical accommodation’ (see §3.3) results in creating compromise forms of a sort—native forms are ‘adapted’ to those found in the source language. The form in the target language remains the same—but it acquires a further meaning.

Borrowed forms are easier to detect than borrowed patterns, and this is why many linguists think—in all likelihood, erroneously—that they are always more common. A careful inductively-based analysis of individual language contact situations suggests the opposite. Languages with few if any borrowed forms tend to show a variety of borrowed patterns. The fact that Hungarian or Finnish do not have an overwhelming number of Indo-European loans does not stop them from having markedly ‘Standard Average Indo-European’ structures (see Haspelmath 2002; Kuteva 2001a, 2001b). Borrowing forms is by no means a prerequisite to borrowing patterns, as demonstrated in several of the chapters below.

Unwanted loans as free forms are easier to detect and to ‘ban’ from the language than bound forms. This is the reason why the few forms borrowed from Tucano into Tariana, and into Hup, are bound (Aikhenvald 2002: 224, and §5 of Chapter 11). This goes against the general tendency to borrow free rather than bound roots and morphemes. Yet the sociolinguistic motivation behind this is clear.
Emblematicity of features is an additional factor in diffusion. A formal or, more rarely, a structural feature can be considered ‘emblematic’ of a language community (see Enfield 2001: 267–8). A prominent feature of the Yawalapiti language of the Xingu area is the unusual sound, ɾ̇, carefully nurtured by the speakers of this highly endangered language as an identity marker. Such emblematic features—for example, a non-Mandarin-like constituent order pattern in Cantonese whereby the adverb sin1 ‘first’ follows the verb (§3.2 of Chapter 9, example (18)), or noun classification devices in some Nilo-Saharan languages (see §6 of Chapter 3)—can be particularly resistant to change of any sort.

A contact-induced feature can become emblematic. The Taiwanese variety of Mandarin underwent massive calquing from Southern Min rather than from the officially dominant Mandarin, probably because Southern Min, and not Mandarin, is ‘emblematic of current loyalties’, serving as ‘a badge of being Taiwanese’ (Chappell 2001: 353). The definite article in Macedonian perceived as one of its most distinctive traits within Serbia is an example of an emblematic—or plainly stereotyped—areal feature in the Balkans (see §7 of Chapter 8).

An ethnic variety of the dominant language (L2 for the community) can also become emblematic, as a ‘signal of ethnic group membership’. A stereotype of ‘verhoodelt’ (or mongrel) English of speakers of Pennsylvania German—with their throw Father down the stairs his hat once and the sulklike—has acquired a certain value of signalling the identity of the Traditional Mennonites, with their emblematic Demut, or ‘humility’ (see §§3 and 4.2 of Chapter 7).

And even ‘hybrid’ nature of a group’s native language may grow into a mark of identity. As Burridge points out in §5 of Chapter 7, Pennsylvania German appears to be ‘heading towards something akin to an English lexicon embedded within a structure still distinctively PG. Although there is no conscious language engineering involved here, speakers are definitely aware of the hybrid nature of their language. For the Old Order Mennonites ‘its “bitser” quality has a positive, almost sacred, value: . . . the low status of the dialect variety is . . . an appropriate symbol of their humility.’

Speakers’ attitudes to linguistic change are yet another factor. Innovations have a better chance in a situation where there is little, or no, resistance to them (Nadkarni 1975: 681). Take speakers of Pennsylvania German. They are quite tolerant to variation in their own language, but resist any change in the prescriptive English they acquire as second language. As a result, their first language bears a strong impact from English, while their English remains fairly intact (see §4.1 and Figure 2, Chapter 7).
Language engineering and planning offer a fertile ground as to how diffusion of forms can be controlled. When it comes to diffusion or borrowing of patterns, speakers and even language planners are often not conscious of their pervasive effects. Israeli Hebrew has kept the bulk of the morphological make-up of a Semitic language, but has incorporated numerous semantic, syntactic, and discourse patterns from Yiddish and other Indo-European languages, despite the efforts of its ‘re-creators’ to retain its ‘purely’ Semitic profile (Zuckermann 2003; Aikhenvald 1990).

In the early twentieth century, Estonian underwent considerable restructuring in its grammar and in its lexicon as a result of a conscious effort (mostly by Johannes Aavik) to make its lexicon less ‘German-like’ and its grammar more ‘elegant’: for instance, a ‘synthetic’ comparative was conceived as ‘better’ than an analytic construction (see Raag 1998; Kurman 1968; Tauli 1984). Conscious language engineering was also oriented against spreading some structural patterns branded as ‘foreign’: this is how Johannes Aavik got rid of ‘German-like’ verb-final constituent order in written Estonian (Ehala 2000). At the opposite extreme, there has been forceful introduction of foreign elements from Chinese into the minority languages of China in order to ‘improve’ them (Matisoff 1991). And Pontius (1997) showed that social enmities (as in the case of Czech and German) can create an obstacle to formal and even to structural borrowings. Some categories are more prone to being manipulated by ‘language engineers’ than others. Gender, classifiers, and counting systems are among the former (Hagège 2004: 109–11; Aikhenvald 2000: 349–50), most probably because they are often perceived as relevant for cultural practices and the role of the sexes within a society (in agreement with Factor 5).

4.2.3 Balanced and displacive language contact The impact of intensive multilingualism and of language contact on a language’s profile depends on the relationships between languages. In a situation of a long-standing linguistic area and stable multilingualism without any dominance relationships, language contact is ‘balanced’. It does not entail loss of languages, or of patterns. Quite the contrary: borrowing and reinterpreting patterns from one’s neighbours results in enrichment, and in increasing linguistic complexity and typological diversity. A prime example of balanced contact was the traditional Vaupés area (Aikhenvald, Chapter 10; Epps, Chapter 11), and West New Britain (Thurston 1987). The linguistic outcome of this ‘peaceful coexistence’ promotes typological diversity.

Hierarchies of prestige groups (castes, etc.) and relations of dominance (social and/or political) between languages or dialects influence the direction
of borrowing and diffusion. There is, typically, borrowing from a prestige into a non-prestige language, e.g. from Mandarin Chinese into other Chinese varieties. A politically dominant language usually influences a less dominant one. Estonian bears an impact from a variety of foreign ‘invaders’ in its lexicon and grammar, including Russian, English, Swedish, and German (Hint 1996: 802). In Papua New Guinea, Tok Pisin is succumbing to the influence of English, and so are numerous vernaculars (Jenkins 2000; Aikhenvald 2004b).

If one group aggressively imposes its language on another group, language contact results in language displacement, loss of the language’s own features, and, ultimately, language shift. Instances of such displacive language contact abound—the oft-quoted examples include forceful Russification of minorities in the Soviet Union and Russia, forceful implementation of Mandarin Chinese destined to oust the minority languages, Hellenization of minorities in Greece, and laws against minority languages in France. Further examples include separating children from their parents and punishing them for using the traditional language, in Australia and also in the Americas. This is described as ‘linguistic stress’ by Silva-Corvalán (1995).

Table 1 summarizes the salient features which distinguish balanced language contact from displacive language contact, covering relationships between languages, linguistic effects, and the outcomes for the languages’ survival (this is reminiscent of symmetrical versus asymmetrical bilingualism in language acquisition discussed in §4.2 of Chapter 9 and Table 2 there).

Balanced language contact promotes typological diversity and results in increased structural complexity. In contrast, displacive language contact produces the opposite: the dominant language imposes its patterns, resulting in simplification of the other language. Its ultimate result is loss of typological diversity accompanied by language loss.

Table 1. Balanced and displacive language contact: a comparison

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Balanced contact</th>
<th>Displacive contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationships between languages</td>
<td>roughly equal, or involving a traditional hierarchy; stable</td>
<td>dominance; unstable</td>
</tr>
<tr>
<td>Linguistic effects</td>
<td>rise in complexity; gain of patterns</td>
<td>loss of patterns; potential simplification</td>
</tr>
<tr>
<td>Results</td>
<td>language maintenance</td>
<td>potential replacement of one language with another</td>
</tr>
</tbody>
</table>
The differentiation between displacive and balanced language contact may not always be clear-cut. A particular language contact situation may involve some displacive tendencies; and the relations between languages may abruptly change or even get reversed. The contact-induced influence of Russian on Estonian, or Latvian, was potentially displacive in the times of Soviet domination. Once this stopped, and Estonia and Latvia gained independence, the ethnic Russians there became a largely ignored minority, under pressure to abandon their own language in favour of the national languages. A less dominant language may occasionally 'fight back’—this is reflected in the well-described resistance in Czech against German influence (Pontius 1997; Vočadlo 1938).

4.2.4 Further sociocultural parameters The parameters outlined in this section have proved useful in the existing investigation of various patterns of language contact. Other potentially important variables include size of community (see Nurse 2000: 260–2); interaction between rural and urban communities; marriage patterns; patterns of trade and warfare (§1 of Chapter 4, and Chapter 3); the lifestyle of speakers (e.g. whether nomadic hunters/gatherers, village-dwelling agriculturalists, nomadic cattle herders, or largely urbanized groups); division of labour between the sexes and between generations; social organization and the kinship system; and religion/mythology.

A variety of language-external circumstances—some of them outlined above—underlie the ‘how’ and the ‘why’ of language contact. Languages can change due to incomplete language acquisition, foreigner talk, koineization, situations of di- or polyglossia (with functional differentiation of languages), or stable multilingualism without such functional differentiation. A binary distinction between ‘language shift’ and ‘language maintenance’ (as in Thomason and Kaufman 1988) should be taken only as a metaphor: for languages which have or have not undergone massive structural convergence (see §5) and system-altering changes, one would be better off positing a continuum between these two extremes.

With loss of traditional culture over the past decades, the social factors which may have been instrumental in producing a language contact situation have to be reconstructed, or even conjectured. Kidnapping women among the Matses belongs to the very recent past—there are still kidnapped women among the Matses, and the traces of the traditional linguistic interaction can be observed. Not so among the Manambu of the Sepik area in New Guinea: raiding neighbouring tribes and subsequent integration of ‘survivors’ (speaking languages other than Manambu) into the Manambu communities is alive
only in folk memory. The unusual complexity of Manambu grammar may well be due to incorporating various ‘substrata’ from conquered groups—but we will never know this for certain.

How long does it take for a language to acquire discernible ‘layers’ of contact-induced change? For now, we leave this question open. The contact between Ewe and Likpe is only about 300–400 years old (§2 of Chapter 4). None of the contact situations described in Chapter 3 is of deep antiquity. The contact situation between Basque and Romance ‘has been in place for about two millennia’ (§1 of Chapter 5). And for Amazonia—including the Vaupés area (Chapters 10 and 11), the Andes, and the Waiwai-Mawayana interaction—we simply cannot tell.

4.3 The net result of language contact
Languages in contact—where a significant proportion of the speakers of one also have some competence in the other—gradually become more like each other in certain features. This is known as convergence. Languages become structurally isomorphic as a result of shared ways of saying things and similar underlying cognitive patterns, without necessarily sharing many forms. This goes with restructuring of semantics, discourse, and syntax involving a mutual adjustment of the languages and/or some patterns ‘winning’ over others. Semantic and pragmatic structures of one language become replicated in the other, following the tendency to achieve linear alignment.

A major factor behind the diffusion of patterns is the desire to be able to say what one’s neighbour can say—making ‘the categories existing in the languages that are in contact mutually compatible and more readily intertranslatable’ (Heine and Kuteva 2003: 561). For the coexisting systems to converge, both (A) functional and semantic and (B) formal matching is desirable. This is facilitated by knowledge of each other’s languages, language attitudes, and the linguistic factors outlined in §4.1.

As a result of language contact, grammatical structures may become almost fully isomorphic. Urdu, Marathi, and Kannada, the three languages spoken in the village of Kupwar (Gumperz and Wilson 1971), provide an oft-quoted example of how grammatical structures and their semantics can be identical without many borrowed forms. In Gumpertz and Wilson’s (1971: 155) words, ‘so great is the similarity among [Kupwar] grammatical structures that we were able to analyze an extensive corpus of bilingual texts involving all three

12 An alternative term for convergence is metatypy (Ross 2001). This has gained a little currency recently. I avoid this term because (a) it is vague in its definition, and (b) it is easy to misuse, since it may be considered to be linked with system-altering changes involving ‘change of type’.
local varieties without having to postulate syntactic categories or rules for one language which were not present in the other languages. We may say, therefore, that the codes used in code-switching situations in Kupwar have a single syntactic structure. Rongpo, a Tibeto-Burman language from Uttar Pradesh, has been heavily influenced by two Indo-Aryan languages (Hindi and Garhwali); this influence resulted in an almost morpheme-per-morpheme equivalence between Rongpo and its neighbours (LaPolla 2001). This can only happen if speakers are proficient in each other’s languages.

Contact-induced change in typologically different linguistic structures produces different results, even if they are influenced by language(s) of a similar type. In the Vaupés linguistic area, Tariana has become more polysynthetic than related Arawak languages: it has developed additional slots for bound morphology, expanded the system of classifier and gender agreement under the influence of Tucanoan, and acquired Tucano-type clause-linking devices. Hup is on the way towards developing mildly synthetic structures. Portuguese spoken by north-west Amazonian Indians and the Portuguese in Sri Lanka developed very different contact-induced categories (Bakker 2005; Aikhenvald 2002).

When languages converge, they gain some features and lose others. We envisage at least three alternative scenarios:

1. **All languages in the area adopt new patterns without losing the old ones.** In all languages in a diffusion area the erstwhile patterns come to coexist with new ones, and new rules develop governing the functional differentiation of new and old patterns. Konkani has adopted Indo-European type relative clauses, together with Dravidian-type relative clauses; both are now used under different circumstances (Nadkarni 1975). Likpe acquired features from Ewe, at the same time keeping its own properties (Chapter 3). The same applies to the three Arawak languages discussed in this volume: Mawayana, with its few Cariban features and a strikingly Arawak profile (Chapter 13), Amuesha with its highly unusual grammatical structure (Chapter 12), and Tariana, many of whose complexities are due to an intricate interplay of Tucanoan and Arawak linguistic traits (Chapter 10). This convergence implies mutual enrichment of languages in contact in a situation of prolonged multilateral contact without any relationship of dominance. This is indicative of balanced contact, with balanced multilingualism.

   These languages in contact have become structurally similar without losing their differences; they tend to become more synthetic; and have gained in structural complexity, adopting patterns from multiple sources with subsequent functional differentiation of each.
2. Languages in contact acquire new common grammar. One-to-one language contact without dominance may result in creating new shared grammatical structures, combining features of both of the languages in contact and creating a compromise between the previously existing structures. Grammatical isomorphism and intertranslatability can be almost complete. An example comes from the contact between Retuarà (Tucanoan) and Yucuna (Arawak) in Colombia. Retuarà has gained an Arawak-type cross-referencing prefix and reanalysed its Tucanoan suffixes as gender-number agreement markers. Yucuna has become fully nominative-accusative having lost its split ergative patterns, and keeping suffixes just to mark gender-number agreement. In marking possession, Retuarà gained Arawak-type prefixes, and lost Tucanoan-type possessive classifiers (Aikhenvald 2003c).

These languages in contact have become structurally similar—but not identical. Structurally, their grammars are neither fully Arawak nor fully Tucanoan.

3. One language adopts the grammar of another. In the situation of one language dominating the others, convergence may involve gradual adoption of the other language’s structures at the expense of its own. This kind of convergence—a typical result of displacive contact—is often the precursor of language attrition and obsolescence (whose linguistic consequences are discussed in Campbell and Muntzel 1989; Brenzinger 1998; and Aikhenvald 2002: 243–61).

The net result of contact-induced change is the addition of new features, and general enrichment. Dominance and ‘displacive’ impact of one language over the others results in overall simplification and regularization, carrying the seeds of impending loss of linguistic diversity.

5 What can we conclude?

Languages reflect the sociolinguistic history of their speakers; and language attitudes influence the outcome of language contact, as do relationships between languages within a contact situation. It is however hard wholeheartedly to agree with the basic starting point in Thomason and Kaufman (1988: 35), that ‘it is the sociolinguistic history of the speakers, and not the structure of their language, that is the primary determinant of the linguistic outcome of language contact’. Typologically different linguistic structures tend to change in different ways. For each category, in order to answer the question of how diffusible it is, we need to know its function, expression, and status within the language.
Disentangling similarities due to language contact from those due to genetic inheritance, independent innovation, chance, and typologically natural tendencies is the major challenge for a comparative linguist. There is rarely one reason for any particular contact-induced change: numerous factors conspire in a multiple motivation.

As Burridge put it in §2.4 of Chapter 7, ‘most of the changes [in Pennsylvania German] appear to have mongrel origins with a number of different internal and external factors playing a role’. There is no doubt that, because of their common origin, these two genetically related languages (Pennsylvania German and English) ‘are “drifting” (à la Sapir) in similar directions; in other words, the seeds for these changes...would have been sown long ago in the proto language...In some cases English contact would have induced certain of these seeds to sprout. In other cases, it would have stimulated the growth of seedlings that had already emerged.’

Diffusion of grammar in contact is not a unitary mechanism of language change. Foreign forms and patterns make their way into a language through a number of paths—enhancement of an already existing feature, or extension by analogy, or reinterpretation and reanalysis, or areally induced grammaticalization, or grammatical accommodation, or loan translation, or lexical and grammatical parallelism. The status and the expression of a category in interacting languages determines the path.

No linguistic feature is entirely ‘borrowing proof’. Neither are linguistic features ‘equal’—some are more prone to diffusion than others. We have identified a number of factors favouring the diffusion of features and of forms listed in §4.1. Following the Mutual Reinforcement Principle, the more facilitating factors are at work, the likelier is a form, or a pattern, to be established in a contact-affected language.

But what if the facilitating factors do not work? In other words, which features would we expect to resist contact? These appear to include genetically inherited properties, especially those to do with marking grammatical relations—such as ergative marking in Basque (§3 of Chapter 5), and prefixal marking of possession and subjects in Arawak languages (Chapters 10, 12, and 13). Having strong areal support helps a feature survive and revive—as is the case with number and noun categorization in Nilotic languages (Chapter 3), serial verbs in Likpe (Chapter 4), and the isolating profile of Tetun Dili (Chapter 6). We hypothesize that the kinds of most resistant feature depend on the proto-language, and also on the composition and characteristics of the area itself.

Diffusion is typically affected by attitude to language and by the emblematicity of certain features in a community. A negative attitude to recognizably
foreign forms can drastically limit their influx into a language. The overall result of language contact also depends on degrees of knowledge of each other’s language, on regularity of contact, and, most importantly, on relations of dominance or rough equality between languages. ‘Balanced’ language contact, without one language trying to oust the other, goes together with long-standing multilingualism and promotes contact-induced increase in language complexity. This is conducive to language maintenance. The opposite—that is, ‘displacive’ language contact—promotes language loss and tends to diminish linguistic diversity. However, since, in Stephen Matthews’s words (§4.2 of Chapter 9), ‘dominance is necessarily a matter of degree’, in many language contact scenarios, these two ‘ideal’ types may be better viewed as extremes on a continuum.

Converging languages in an area are likely to adopt new patterns from multiple sources, or acquire new shared grammatical structures, creating a ‘compromise’ pattern. Alternatively, one language may adopt the grammar of another—this is a typical result of displacive contact.

The aim of this volume is to evaluate diffusion and linguistic convergence from multiple perspectives, and at various levels—in different language contact situations, by systematically concentrating on diffusion of patterns and concomitant diffusion of forms so as to understand how languages come to share aspects of their grammars.

6 How this volume is organized

The main focus of this volume is on ‘layered’ languages, with a discernible impact of contact-induced change. It starts with R. M. W. Dixon’s analysis of diffusion in the Australian linguistic area (Chapter 2, ‘Grammatical diffusion in Australia: free and bound pronouns’). As mentioned in §2.2, Australian languages form a long-standing linguistic area—rather than one genetic unit—characterized by multilateral and multidirectional diffusion, and multiple instances of cyclic development, almost always spread through language contact. This leads to establishing critical structural similarities between languages, and adjoining dialects belonging to different languages, thus adding further complexities to the intricate interweaving of genetic links with areal allegiances.

The next two chapters address different aspects of language contact within the African continent. In Chapter 3, ‘How long do linguistic areas last? Western Nilotic grammars in contact’, Anne Storch investigates different grammatical consequences of one-to-one language contact between genetically unrelated Belanda Bor (Lwoo of Western Nilotic) and Bviri (Ubangi), and
between genetically related languages. Two of these, Luwo and Dinka, belong to one, Western Nilotic, subgroup. Another pair of languages in contact belong to different subgroups of Nilotic: Labwor, a Western Nilotic language, and Karamojong, from Eastern Nilotic. The contact-induced changes are looked at within a larger areal perspective. None of the contacts is particularly long—due to frequent migrations, slave trade, and warfare. In this situation, the features most prone to diffusion are the ones ‘that do not violate emblematic patterns and that can be integrated into the system without altering its most basic structures’.

In Chapter 4, ‘Grammars in contact in the Volta Basin (West Africa): on contact-induced grammatical change in Likpe’, Felix Ameka provides an incisive analysis of the contact-induced changes in Likpe (Na-Togo subgroup of Kwa) which underwent massive impact of patterns (though not so much of forms) from Ewe, a Kwa language of the Gbe subgroup. The contact between Ewe and Likpe is about 300–400 years old, and Likpe shows marked resistance to borrowing forms. The constructions in Likpe which bear an impact from Ewe include marking plural number on kinship terms and proper nouns (developed from a third person pronominal clitic), a O-V-V nominalization strategy, and a number of complementation strategies (some of these involve a borrowed complementizer which coexists with its native synonym). The most spectacular contact-induced change concerns the development of a present progressive construction involving the verb ‘hold’ in Likpe, which happens to be a lookalike of a progressive marker ‘be (at)’ in Ewe. This is a prime example of grammatical accommodation. There is an additional factor at work: both languages are spoken in the Volta Basin area, and so the changes come from multiple sources, with areally established constructions overlaying the immediate impact of one language upon another.

The next four chapters focus on Indo-European languages in contact. In Chapter 5, ‘Basque in contact with Romance languages’, Gerd Jendraschek discusses the impact of Western Romance languages upon the grammar of Basque, focusing on the language actively spoken in the Basque country. Basque has been in contact with Romance languages for about 2,000 years, and the exact source and timing of each contact-induced change is not easy to trace. The major changes include a tendency towards developing analytic constructions, contact-induced enhancement of constructions already existing in Basque (such as number marking on pronouns), reinterpretation of existing structures to fit in with the Romance mould (developing a passive, and postposed relative clauses marked with interrogatives), contact-induced Spanish-style grammaticalizations of verbs ‘go’ and ‘carry’ into aspect markers, analogical development of a derivational prefix to match Spanish re-, and
rampant diffusion of pragmatic patterns. Only some changes are well and truly system altering: despite a superficial Romance flavour to it, Basque remains ergative, and strongly resists borrowed forms.

Tetun Dili, the main lingua franca of East Timor, is an Austronesian language whose predominantly isolating profile has developed as a result of its long-standing interaction with other languages in the area, especially Mambae. An intensive but relatively recent contact with Portuguese has resulted in a number of changes, which include restructuring word classes, decreasing productivity of serial verb constructions, and introducing Portuguese-type clause types and clause-linking devices. This is the topic of Chapter 6, ‘Language contact and convergence in East Timor: the case of Tetun Dili’, by John Hajek. A further problem in the analysis of Tetun Dili (especially when compared with its archaic varieties) is multiple motivation for syntactic changes, whereby an erstwhile impact from Malay was later reinforced by Portuguese.

What happens if one Germanic language affects another? In Chapter 7, ‘Language contact and convergence in Pennsylvania German’, Kate Burridge provides a lively account of how Pennsylvania German has been influenced by English. But here is a catch: since the two languages are closely related, every English-looking feature in Pennsylvania German could well be attributed to parallel development, or simple chance. The patterns of constituent order, the progressive construction, the expression of future, the passives, and the case syncretism offer prime examples of multiple motivation where ‘language-internal’ and ‘language-external’ factors are hard to disentangle. In Kate Burridge’s own words, English acts as a ‘fertilizer’, pushing ahead a change which was in place already. At the same time, the Pennsylvania German community is gradually becoming more open to the outside, that is to the English-speaking world. As a result, English discourse-pragmatic particles and politeness formula infiltrate the language more and more. But why is it that Pennsylvania German bears a strong impact of English, while the English spoken by the same community is relatively intact? The answer lies in the language attitudes: the Pennsylvania German speakers do not mind speaking a humble ‘hybrid’ variety of their own language; but are fairly prescriptive as far as their English—a second language—goes.

No volume on language contact is complete without an account of the Balkans—the first linguistic area to have been identified as such. In Chapter 8, ‘Balkanizing the Balkan sprachbund: a closer look at grammatical permeability and feature distribution’, Victor Friedman provides a list of most salient ‘balkanisms’, and then examines two groups of features—the marking of future, and markers of deixis and definiteness. He concludes that the ‘will’ future in the Balkans is ‘an example of mutual reinforcement and feature
selection that began to take shape in the late middle ages’, with western Macedonia and adjacent parts of Albania as the ‘epicentre’ of the innovation. The features discussed in the chapter ‘spread and diminish’ around the current South Slavic and adjacent territories which makes these the most central parts of the whole area.

This takes us to other linguistic areas, involving genetically unrelated languages of varied typological profiles. In Chapter 9, ‘Cantonese grammar in areal perspective’, Stephen Matthews focuses on the role of language contact in the development of Cantonese as the prestige and de facto standard variety of the Yue dialect groups. Striking differences between Cantonese and other Sinitic languages—especially Mandarin Chinese—are indicative of its ‘layered’ status: Matthews examines the patterns shared with other languages in a broadly defined south-eastern Asian linguistic area, and features shared with non-Sinitic Tai-Kadai and Miao-Yao languages. These include classifiers in possessive constructions and ‘bare’ classifiers as indicators of definiteness.

The linguistic area of the Vaupés—characterized by obligatory multilingualism controlled by linguistic exogamy, rampant diffusion of patterns, and cultural inhibition against diffusion of actual forms—is perhaps the best researched in the Amazonian region. The area involves Tucanoan, Arawak, and Nadahup (Makú) languages. In Chapter 10, Alexandra Y. Aikhenvald addresses the issues of ‘Semantics and pragmatics of grammatical relations in the Vaupés linguistic area’. She starts with recapitulating general properties of the area, and then shows how semantically and pragmatically motivated marking of non-subjects, a strong feature throughout the Vaupés area, originated in Tucanoan, and—permeating both Tariana and Nadahup (Makú) languages—made its way into Tariana, the only Arawak language in the area. The diffusion involved matching pragmatic motivation, semantic motivation, and also grammatical function. Pragmatically determined marking of contrastive subjects, recently developed by some Tucanoan languages, readily infiltrated Tariana. The erstwhile balanced contact within the area resulted in making Tariana more complex, unlike the recent displacive contact with Tucano.

In Chapter 11, ‘The Vaupés melting pot: Tucanoan influence on Hup’, Patience Epps offers a new perspective on the Vaupés area. She convincingly demonstrates that Hup, a member of the Nadahup (Makú) family, is a bona fide representative of the Vaupés area, despite the fact that the Hup people are outside the exogamous network. The language shares numerous features with the Tucano language (with which it is in constant interaction)—these cover phonology, morphology, and syntax. Hup has developed an extensive system of evidentials, verb compounding, modality, numerals, and even classifiers to
match the Tucanoan patterns. None of these features is found in the only member of the Nadahup (Makú) family spoken outside the area. Hup ‘embraces the regional equation of language and identity’ whereby ‘grammatical patterns diffuse easily but borrowing of forms is actively resisted’.

The Arawak language family is the largest and the most diverse in the Amazonian region. Some languages of this family are strikingly unlike their relatives. Amuesha, a ‘mystery’ language of Amazonia, is one such example. In Chapter 12, ‘The Quechua impact in Amuesha, an Arawak language of the Peruvian Amazon’, Willem F. H. Adelaar discusses the make-up of Amuesha, disentangling various layers of lexical influence of different Quechua varieties, and the ways in which Quechua could be held accountable for the unusual phonology and morphosyntax of Amuesha. Many non-Arawak—and non-Quechua—features of the language remain unexplained and unexplainable. Many languages which could have played a role in shaping Amuesha are now extinct. We can only speculate—perhaps Amuesha could have been an old trade language which incorporated numerous elements from the then important Quechua; or it is the product of language shift of an unidentified community.

Mawayana is another unusual Arawak language. Unlike Amuesha, it is now moribund—but the few elderly people who speak it speak it well. The language has been influenced by a variety of North Cariban languages, all from the Guiana branch—first the Waiwai complex, and then, quite recently, Trio. Taruma, an isolate whose representatives were part of the Waiwai group, could have also played a role in shaping up Mawayana as it is now. In Chapter 13, ‘Feeling the need: the borrowing of Cariban functional categories into Mawayana (Arawak)’, Eithne Carlin discusses the various features Mawayana developed as a result of a ‘perceivable gap’. These include borrowing an exclusive pronoun, and developing such Cariban-flavoured categories as nominal past, affective marker, frustrative, and simulative.

The volume ends with a short ‘Glossary of terms’ used throughout, within the context of problems linked to how languages affect each other. This is provided in order to avoid terminological confusion, and to make sure the readers understand what the authors have in mind.

In Ameka’s words (§6 of Chapter 4), ‘a holistic understanding of language change requires multiple perspectives’. Due to the limitations of space, quite a few issues remained untouched—speed of contact and language change, time depth of areal diffusion, people’s perception of multilingual situations, to name but a few. To unravel further complexities in language contact, we need many more in-depth factual studies of the ‘how’ and ‘why’ of language change. The chapters in this volume provide a start.
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