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Stapert, E.L.

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Author: Stapert, Eugénie

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CHAPTER 3

LANGUAGE CONTACT THEORY

3.1 THE FIELD OF LANGUAGE CONTACT STUDIES

3.1.1 DEFINITION AND BRIEF HISTORY OF THE FIELD

In the most trivial sense, language contact occurs whenever more than one language variety is spoken in the same place at the same time (Thomason 2001: 1). However, such settings are only of interest for the study of contact-induced change when the speakers engage in interaction, in other words, when ‘language contact’ becomes ‘speaker contact’.

While ‘language contact’ has become the standardised label for a subdiscipline of linguistics, it can be misleading since it implies that languages can be in contact independently of their speakers. It evokes a scenario where languages resemble autonomous entities, able to evolve, change and maintain contacts beyond the sphere of their speakers. To eliminate this obvious delusion from the start it is important to remind the reader of a statement with which most linguists would agree, namely that “it is not the languages that innovate, it is the speakers who innovate.” (Milroy & Milroy 1985: 45). Although in this dissertation I will follow common practice and use the term ‘language contact’, it is important to keep in mind that it is meant as a shortcut to refer to contact between speakers and the consequent linguistic variation and change.

Thus the study of language contact is concerned with the investigation of the linguistic consequences of encounters between people who speak different languages or language varieties. Questions to be asked include: which factors shape the linguistic outcome of a contact situation? Are there any linguistic restrictions on the kinds of possible transfer between languages? What is the role of psycholinguistic processing and production mechanisms of the bilingual brain during this process? Is there a correlation between the social setting in which the contact takes place and the linguistic outcome? If there is, is it possible to predict the linguistic outcome from the social setting, and reversely, can we reconstruct past social situations through the analysis of contact-induced linguistic change?

Language contact may be studied at the level of the individual, as in the case of a bilingual person (3.1), as well as at the level of the community in the case of communities where more than one language is spoken (3.2). Here not every individual of the community has to be bilingual, and proficiency in the languages may be distributed across the community to varying degrees.

(3.1) Two or more languages will be said to be *IN CONTACT* if they are used alternately by the same persons. (Weinreich 1953: 1)

(3.2) Language contact occurs when speakers of different languages interact and their languages influence each other. (Matras 2009, preface)

It follows that the linguistic consequences of encounters between people never occur in a social vacuum and that the importance of the social context in which linguistic changes occur is undeniable. This idea appears at intervals in the literature on language contact (e.g. Weinreich 1953: 3, Thomason and Kaufman 1988: 35, Johanson 2002: 307), and today the significance of extra-linguistic factors in the explanation of contact-induced change is recognised by most scholars (cf. Thomason 2001, 2010, Johanson 2002: 308, Muysken 2010, Ross, 2003, forthcoming).

The first milestone emphasising the multi-faceted nature of contact situations is Weinreich's book *Languages in Contact* (1953). While much of this book reads as a research plan of which many details are still unexplored rather than as the presentation of results, Weinreich argues convincingly that

[a] full account of interference in a language-contact situation, including the diffusion, persistence, and evanescence of a particular interference phenomenon, is possible only if the extra-linguistic factors are considered. (Weinreich 1953: 3).

Being a linguist, and more specifically a linguist influenced by the structuralist theory that was dominant at the time, Weinreich acknowledges the importance of purely structural and typological factors in contact-induced change, but he emphasises that “on an interdisciplinary basis research into language contact achieves increased depth and validity.” (Weinreich 1953: 4). Many of Weinreich’s valuable insights and suggestions for research temporarily faded into the background with the rise of generative linguistics. In this framework, language is an autonomous system characterised by the principles of Universal Grammar, which is innate in the brain of every individual. Since these principles are assumed to be universal to humanity, understanding them in one person would be sufficient to understand the language system in general. Such ideas obviously reduced the significance of comparative linguistics and of extra-linguistic factors in the explanation of language development and change.

Attention to the role of social factors in contact situations was reawakened by the publication of Thomason and Kaufman’s influential book *Language contact, Creolization and Genetic Linguistics* in 1988. In this work they present a theory of language contact, postulating correlations between social contact situations and their linguistic outcomes (see Section 3.1.4.1 for more detail). They revived some of Weinreich’s interdisciplinary ideas, while at the same time taking them to a more advanced level by setting up an explanatory and predictive model. Thomason and Kaufman’s book became one of the most influential and widely cited textbooks on language contact, and can, in a sense, be seen as a trigger for the revitalisation of interest in the field. The publication of this work was followed by an increase in descriptive case studies of contact situations, as well as theoretical models, and the dotted line of sporadic publications on the topic fanned out into a wide diversity of different research programs from the end of the 1980’s onwards. While the elaborated details of these programs are innovative, many hinge upon subparts of the interdisciplinary research sketch that Weinreich advanced some three decades earlier.

This chapter will introduce a small selection of these approaches in a nutshell. Since a complete overview of the field is unfeasible, as well as undesirable for the current purpose, I will discuss the main lines of thought from four approaches that have proven useful for the interpretation of the data in this study. The discussion is organised thematically rather than chronologically, and groups together contributions of scholars with similar theoretical perspectives on

what determines the linguistic outcomes of a contact situation. Obviously, this separation into categories is artificial and there are many points of overlap and intersection between the approaches. However, such a division will be helpful for the sake of presentation.

The discussion begins with a summary of the structuralist approach, according to which purely linguistic factors determine the limits of language change. Subsequent research has shown that language structure is not the only relevant factor and that psycholinguistic and sociolinguistic factors play an equally influential part in the linguistic outcomes of contact situations. Since the ultimate origin of language change is the individual, the obvious starting point is a discussion of the psycholinguistic processes that take place in the bilingual brain. This includes situations of second language acquisition (Section 3.1.3.1) as well as bilingual first language acquisition (Section 3.1.3.2). Equipped with this background knowledge, social dynamics at a community level will be discussed in Section 3.1.4. While an impressive amount of research has been done to describe contact-induced change at the level of both the individual and the community, little is known about the link between them. This topic is briefly touched upon in Section 3.1.5 in the discussion of the role of social networks in the spread and adoption of linguistic innovations in a community, thus also beginning to establish the connection between synchronic variation and diachronic change.

3.1.2 STRUCTURAL CONSTRAINTS

The issue as to what can and cannot be transferred across languages has been approached from various angles. According to the structuralists, the range of possible kinds of transfer is determined by the structural properties of the languages in contact, more specifically by: a) the structural integration of the transferred element; and b) the typological similarity between the languages in contact (e.g. Weinreich 1953, Moravcsik 1978). The structuralist school teaches that cultural elements, including language, are part of a coherent structural system and receive their meaning solely through their relations with other elements within the system. This underlying network of relationships is stable and remains constant despite surface variation. According to the structuralists, this explains why languages are resistant to foreign elements that do not match, or would threaten the integrity of this deep structure. Therefore the assumption with

respect to the first constraint of structural integration is that structurally highly integrated elements, such as bound morphology, are less likely to be transferred than structurally independent elements, such as lexical items.

A convinced advocate of this line of thought is Meillet, who defines language as “une système où tout se tient” [a system where everything is interconnected] (Meillet 1915: 463) and which consists of three components: a phonetic system; a morphological system; and a vocabulary (Meillet 1948: 83). The first two systems are closed, structurally highly integrated and internally more stable, whereas the lexicon is open (but see Thurston 1987, among others, for a different opinion). Therefore, the phonological and morphological systems are more resistant to foreign influence than the lexicon.

Nonetheless Meillet concedes that phonological and morphological contact-induced changes are not entirely impossible, and that sometimes even the stable parts of languages are affected by contact (Meillet 1948: 85). For the phonological system, he adduces the example of the Germanic phoneme /w/ which was introduced into Gallo-Romance in forms like *werra* ‘war’, and the Persian relativizer *ki* which occurs in Turkish. However, for the phonological elements he argues that they are unstable and temporary, since *werra* soon changed into *guerre* ‘war’, replacing the Germanic phoneme /w/ with Romance /g/. With respect to *ki* in Turkish, Meillet claims that its use bears great similarity to a lexical item, and that speakers of the recipient language may conceive of it as such (Meillet 1948: 87). However, he does not elaborate on the criteria on which this judgement is based. Thus, despite such instances, Meillet concludes that:

It follows [...] that one borrows from a foreign language little words with grammatical value; one hardly borrows real grammatical forms. Thus one arrives always at the same conclusion: what is borrowable is essentially vocabulary items.¹

A similar opinion is manifested in the work of Sapir (associated with the school of American structuralism), and Jakobson (an adherent of the Prague Circle) albeit in a more moderate form. Both Sapir and Jakobson propose that it is possible for languages to accept foreign grammatical, i.e. structurally integrated, elements into their system, “provided that these new variations... are in the direction of the

¹ “Il arrive [...] qu’on emprunte à un langage étrangère des petits mots à valeur grammaticale; on n’emprunte guère de formes grammaticales. Ainsi l’on est toujours ramené à la même conclusion: ce qui s’emprunte, ce sont essentiellement des éléments de vocabulaire.” (Meillet 1948: 87).

native drift” (Sapir 1921: 200) and “correspond to the natural tendencies of development” of the recipient language (Jakobson [1938] 1962: 241).

This links to the second constraint that grammatical structures can be transferred only between languages with a similar typological profile. According to this hypothesis, one would for instance not expect languages to change from being head-initial to being head-final, or for agglutinating languages to adopt synthetic elements. However, subsequent research has provided clear counterexamples to this claim (see for example Ross 1996, 2008, Thomason 2010).

Harris and Campbell point out that the implication of the above-mentioned constraints would be that transfer in language contact situations would only be possible from analytic languages to more synthetic languages and not the other way round, since structurally independent elements are more easily transferrable (Harris and Campbell 1995: 31, Van Coetsem 1995: 67, 2000: 31, 111). However, this appears not to be the case. While both constraints are not unmotivated, and may reflect cross-linguistic tendencies, they are anything but absolute (for more details see Harris and Campbell 1995: Chapter 6). The transfer of elements between typologically similar languages is intuitively more likely, and unbound elements may certainly move around more easily and frequently than bound elements, but over the years abundant evidence has accumulated showing that there are too many counterexamples for such linguistic constraints to qualify as a rule.

A classic example is Asia Minor Greek, a dialect of Greek that has been in intense contact with Turkish over a long period of time. In this variety of Greek, phonemes and phonological rules have been adopted from Turkish, resulting in the introduction of new phonemes into its phonological system (ö, ü, ĩ, ç, j), and the adoption of vowel harmony, a phenomenon that is not present in other varieties of Greek (Dawkins 1916: 39, 41, Janse 1998: 524). An example of morphological transfer is provided by Resígaro, an Arawakan language spoken in northwest Amazonia. Seifart (2011: 17) shows that this language has undergone substantial influence from Bora, an unrelated Witotoan language spoken in the same region. In Resígaro, not only lexical items, but also a large number of bound morphemes, including quantifiers, pronominal forms and numerals appear to be of Bora origin. The typological profile of Ossetic provides a counterexample to the claim that transfer can only take place between typologically similar systems. Ossetic, which is an Indo-European language, has adopted many features from its Kartvelian neighbour Georgian (Thomason 2010: 42). In addition to a large number of loanwords, these include the introduction of agglutinative morphology into a

system that used to be largely flexional, and a more rigid SOV order. Another example of contact-induced influence among typologically dissimilar languages is the introduction of finite relative clauses in literary Dravidian languages as a result of contact with Indo-Aryan languages (Gumperz and Wilson 1971, Nadkarni 1975, Emenau 1981).

Thus, while structuralist linguistic constraints may reflect cross-linguistic tendencies in the types of transfer that occur, the data show that they do not account for the range of attested phenomena. It seems that contact-induced change is more than a predictable chemical reaction between two linguistic systems, and that for an accurate understanding of its underlying motivations we need a better comprehension of the bilingual human brain, and on a larger scale the bilingual community, in which language is generated.

3.1.3. PSYCHOLINGUISTIC CONSTRAINTS

The relation between language and the brain has been a topic of interest in linguistic research for a long time. As a hearer, we witness and interpret the end product of the speech process, but what actually happens in the speaker's brain remains invisible to the naked eye. However, valuable cues about the psycholinguistic processes in language production and processing are provided by experimental psycholinguistic research, speech error analyses, and by EEG scans that measure brain activity in different regions of the brain.

Since contact-induced change can only take place when at least part of the speech community is proficient to a certain degree in more than one language, research on bilingualism is of particular importance for the understanding of the underlying psycholinguistic mechanisms of this type of change. Bi- or multilingualism is of course not an innate characteristic of an individual, but is acquired during one's lifetime as a child, an adolescent or an adult. This deserves mentioning since the age at which the second language is acquired appears to have significant influence on the level of proficiency that a person can attain in his second language². While individual variation makes it hard to generalise, the

² Although I will be referring to second language acquisition and bilingualism most of the time, in language contact situations multilingualism is certainly no exception either. However, since most of the experimental research has been carried out in bilingual settings, we can only talk with any

tendency is that the earlier in life a language is acquired, the more native-like proficiency can be. This thought is formulated more specifically in the so-called critical period hypothesis (Lenneberg 1967: 179). According to this hypothesis there is a qualitative difference in the way people learn a language before and after this period, which is reached some time during puberty. After this point, it is thought that children are unlikely to acquire a language on a native level of proficiency. It is thus necessary to distinguish between two kinds of acquisition related to different age groups. First, there is second language acquisition (or L2 acquisition), which applies to adolescents and adults who learn their second language after the critical period. Depending on aptitude and attitude, they can still reach very high levels of proficiency, but it is very rare to find individuals in this group who master their second language with native-like proficiency and fluency. The second kind applies to children who grow up bilingually, and learn both languages natively. Since for these children both languages are their mother tongue, the distinction between a first and second language becomes irrelevant, and a more appropriate label for their language learning process is bilingual acquisition.

Over time the reputation of bilingualism and its presumed effects on the human mind have changed significantly. While during the first half of the 20th century the predominant view described bilingualism as a handicap, or at least as a mental burden that needed to be avoided (e.g. Weinreich 1953: 8), the current view ascribes to it much more positive properties. Most scholars consider bilingualism no burden at all, and even suggest that it may be beneficial to language development itself, as well as to other cognitive skills. For example, it has been claimed that bilingualism increases the ability to focus attention and that bilinguals are significantly better at filtering speech sounds from background noise (Krizman et al. 2012). Other research suggests that bilingualism may even delay dementia (Bialystok et al. 2012).

3.1.3.1 SECOND LANGUAGE ACQUISITION

Everyone who has taken on the challenge of learning a foreign language will have noticed that during the learning process elements from one language occasionally

certainty about results in this particular kind of setting. Although we may hypothesise that many principles apply in the same way to multilingual individuals, this needs to be tested explicitly.

slip into the other. In other words, keeping the two language systems separate does not always come naturally. The transfer may apply to lexical items as well as to grammatical structures, and may occur voluntarily or involuntarily depending on factors such as language proficiency and attitude of the speaker, as well as of the conversational partner. This leads to the question of how languages are organised in the brain. Does the bilingual brain contain separate systems for each language, or do all languages tap into one underlying linguistic and/or conceptual system?

Initially the assumption was that each language had its own self-contained structure and thus that the two linguistic and conceptual systems were entirely separated from each other (Penfield and Roberts 1959 cited in Hamers and Blanc 2000: 173). Current opinions reject such a radical separation, yet differ with respect to the extent to which the systems are assumed to be shared. While some scholars propose that the two languages share one system of conceptual representation (e.g. Meuter 2005: 349, Grosjean: 441), others suggest that the conceptual and linguistic systems are kept separate and are structured in a hierarchical way, with a common processor at the conceptual level and separate processors at the level of linguistic encoding (*ibid*). While the details of this issue remain unresolved, experimental research with bilinguals provides supporting evidence for the idea that there is interaction between the languages in the bilingual brain, and that even if they belong to different systems, they are certainly not isolated from each other.

For example, Meuter (2005) gives some insight into how this interaction comes about. She shows that once a language is being learned, it is always active and can never be 'switched off' (Meuter 2005: 352). Its activity level can be reduced, but a language is never deactivated entirely, which raises the question how a bilingual is able to choose a language without major interference from the other. Meuter demonstrates that this selection takes place through suppression of the undesired language rather than activation of the desired one³. This suppression is cognitively demanding, and increasingly so the greater the proficiency and familiarity with the language. When suppression is not completely

³ In her experiments with unbalanced bilinguals, Meuter shows that counter to expectations they take longer to switch from their L2 to their L1 than the other way round. Her proposed explanation for this pattern is that it is cognitively much more demanding to undo the strong inhibition that is needed to suppress the L1 than it is for L2, leading to the longer reaction time. This effect is only present in unbalanced bilinguals and does not show in individuals that are equally proficient in both languages.

successful, elements or structures of the undesired language may slip through the barrier and may be transferred into the other language. This explains how involuntary interference of the suppressed source language into the recipient target language may take place, and why interference from a bilinguals' dominant language (often L1), which is more difficult to suppress, into his non-dominant language (often L2) is more likely to happen than the other way round (see also Van Coetsem's theory in Section 3.1.3.3). Additional evidence for a porous boundary between the two language systems comes from work by Robinson and Ellis (2008: 7), among others, who show that the error pattern in L2 learners differs depending on the (dominant) L1 of the speaker, confirming the idea that languages in the bilingual brain are not isolated systems and clearly interact with each other.

While in situations of imperfect learning (e.g. due to insufficient exposure to the target language) the bilingual may resort to elements from his dominant language out of necessity, in other situations the bilingual may manipulate the degree of transfer to negotiate the right code with his conversation partner. This variation in relative activation level of the bilinguals' two languages is what Grosjean ([2000] 2007: 430) calls 'language modes'. Although in reality language activation is a continuum and cannot be divided into discrete categories, for descriptive purposes Grosjean identifies three modes, corresponding to three levels of relative language activation in a bilingual's languages A and B: a monolingual, intermediate and bilingual language mode. In monolingual language mode, a bilinguals' language A is highly activated, while for B the activation level is very low (i.e. it needs to be strongly suppressed). In the intermediate mode B is activated somewhat more, and in the bilingual mode languages A and B are both highly active, but A still serves as the 'base' language (Grosjean [2000] 2007: 430). Depending on the level of bilingualism of his conversational partner, the bilingual speaker will now decide which language to speak and how much interference from his other language is allowed, or even needed. This leads to different degrees of transfer in the speech of the same individual, conditioned by non-linguistic factors (i.e. conversation partner) rather than language proficiency. While Grosjean does not specify whether a certain language mode correlates with certain types of interference, Treffers-Daller (1998: 196) notes the following pattern of correspondence between language mode and linguistic reflection: in the monolingual mode there is only minimal interference in the form of some lexical copies; in intermediate mode interference is rather pragmatic in character, but the

switches between languages are clearly marked by pauses; in bilingual mode there are inter- as well as intrasentential switches between the languages, which occur without hesitation (Treffers-Daller 1998: 196-197). If it is correct to assume that these hesitations are the result of the effort it takes to conquer the inhibition of language activity, then this would mean that in the bilingual mode, where no delays were noticed in the speech flow, there is barely any suppression of either of the languages.

3.1.3.2 BILINGUAL ACQUISITION

While ‘mistakes’ made by second language learners are clearly a source of innovation, and thus a potential source of language change, alterations in the speech of bilingual first language learners can fulfil a similar function. In their longitudinal study of English-Chinese bilingual children, Matthews and Yip (2009) show that the two language systems of these children are also not isolated from each other during the acquisition process. Instead, the children match structures and semantic patterns in one language to patterns in the other through interlingual identification (see Section 3.1.3.3 for Weinreich’s description of this term in second language acquisition), leading to the innovative use of elements and constructions when the match is not perfect. Matthews and Yip focus in particular on the use of the English adverb *already* and the verb *give*, which the English-Cantonese bilingual children use as a perfective marker and as a permissive, respectively, based on the model of Cantonese. Matthews and Yip witness this in the synchronic speech of bilingual children, but importantly this use of these English elements is also a feature of Singaporean Colloquial English, a mixed language that developed as the result of contact between speakers of English and Cantonese. Of course, the bilingual children base their use of these elements on the synchronic polyfunctionality of corresponding Cantonese elements, and are by no means aware of the diachronic processes of grammaticalisation that underlie some of their uses in current Singaporean Colloquial English. However, the striking similarity between the innovative patterns of use in young English-Cantonese bilingual children and the established mixed language spoken by adults leads Matthews and Yip to the conclusion that bilingual acquisition may also be a significant impetus for the creation of contact-induced change. Most likely, the children in Matthews and Yip’s study will lose

their innovative use of English elements as soon as they go to an English-speaking school, but “...what would happen given a whole community of similar children?” (Matthews and Yip 2009: 390). In other words what would happen if there were nobody to ‘correct’ them? Or more specifically, what would happen if these children were not surrounded by speakers who follow the norms of Standard English, and who eventually serve as a model for them to revise their use of English? Matthews and Yip assume that this is exactly what happened in the development of Singaporean Colloquial English, thus showing how bilingual acquisition plays an important role in contact-induced change, alongside second language acquisition.

3.1.3.3 BILINGUALISM IN LANGUAGE CONTACT THEORY

As was mentioned in Section 3.1.1, the perception of the bilingual individual as the locus of language contact and his crucial role as a source of innovations in the onset of contact-induced change was recognised as early as Weinreich. While he clearly acknowledges the intricacy of each individual contact situation, the quotes below demonstrate that Weinreich assigned primary importance to the individual in his approach to language contact (1953: 71):

To predict typical forms of interference from the sociolinguistic description of a bilingual community and a structural description of its languages is the ultimate goal of interference studies. Unfortunately this aim cannot be attained till the missing link - the correlations between characteristics of individual bilinguals and interference in their speech - is supplied.

When one considers, however, that the bilingual speaker is the ultimate locus of language contact, it is clear that even socio-cultural factors regulate interference through the mediation of individual speakers.

Although Weinreich’s ideas reflect the predominance of structuralism at the time (see Section 3.1.1), which is why he is often mentioned in one breath with structuralists, my impression, based on quotes like the above, is that his view is much broader than this. While structural factors play a significant role in his ideas about contact-induced change, they seem to be only one of many factors that he considers necessary to a full understanding of the phenomenon. Thus, as a

linguist, one may “see the cause of the susceptibility of a language to foreign influence in its structural weaknesses” (Weinreich 1953: 4),

[b]ut the extent, direction, and nature of interference of one language with another can be explained even more thoroughly in terms of the speech behaviour of bilingual individuals, which in turn is conditioned by social relations in the community in which they live. In other words more complete findings can be expected from coordinated efforts of all the disciplines interested in the problems. (Weinreich 1953: 4-5)

Among these disciplines, he includes sociology, psychology, ethnography, pedagogy, geography and even law. The structuralist inheritance is apparent in Weinreich’s view that transfer may occur at the level of speech (or *parole*), corresponding to what is often called language variation, and at the level of language (or *langue*), corresponding to language change. Contact influence may manifest itself through the transfer of actual linguistic material, as well as through the important underlying process of ‘interlingual identification’ whereby the bilingual speaker matches linguistic elements or patterns of one language with elements or patterns of the other, even if that match is not perfect. In the latter case, interlingual identification may lead to changes in the phonology, syntactic structures or semantics of the speaker’s second language. According to Weinreich, this identification occurs in order to reduce the ‘burden’ of bilingualism since the assumption is that it is cognitively less costly to have a single set of linguistic distinctions to select from, rather than different sets for each language (but see Section 3.1.3).

A more recent theory that builds on the idea of the bilingual individual as the locus of contact is formulated by Van Coetsem (2000).

Second language acquisition is language contact. One can have language contact without second language acquisition, but not second language acquisition without language contact. Language contact, which occurs wherever one language is influencing another, is here a condition *sine qua non*. (Van Coetsem 2000: 35)

In his theoretical model, Van Coetsem distinguishes between two main processes of contact-induced change, identified as borrowing and imposition. The distinction between them is determined by the linguistic dominance of the bilingual speaker, whereby dominance is defined as the speaker’s relative proficiency in a certain language. Linguistic transfer is described in terms of a

‘source language’ (SL) and a ‘recipient language’ (RL), regardless of the material that is transferred (substance or structure) or the process of transfer (borrowing or imposition). Borrowing refers to a situation where the speaker transfers linguistic elements from his non-dominant SL (often L2) into his dominant RL, whereas imposition occurs when the speaker transfers linguistic features from his dominant SL (often L1)⁴ into his non-dominant RL. In this model, the dominant language is also always the ‘agentive’ language, either in projecting its own structures onto the non-dominant language, or by taking on (or receiving) features of the non-dominant language. Therefore, Van Coetsem associates imposition with SL-agentivity and borrowing with RL-agentivity. Schematically this looks as follows:

Table 3.1: Relation between linguistic dominance and processes of change according to Van Coetsem (1995, 2000)

Process	Linguistic Dominance		Agentivity	
Imposition	dom SL	→	non-dom RL	SL
Borrowing	non-dom SL	→	dom RL	RL

Another important concept in his theory is the stability gradient. According to Van Coetsem, certain language components are more stable than others, and are therefore less sensitive to influence from other languages. Importantly, the degree of stability in turn influences the kinds of linguistic transfer that may be expected in the processes of imposition and borrowing (Van Coetsem 1995: 67). In Van Coetsem's words, differences in stability reflect differences in ‘structuredness’ of linguistic domains as well as in ‘consciousness’ of the speaker about them (ibid.: 68). Stable parts of a language are linguistic domains that are more structured and consist of less independent constituents or elements. Since they are part of a system, the speaker is less conscious of the use of every individual element and their use is assumed to be more automatised during the speech production process. Van Coetsem's assumption is that this ‘automatic’ use of such language domains renders them less susceptible to change. The stable subsystems include syntax or the phonological and articulatory systems. Less stable parts, on the

⁴ In practice, the dominant language is often L1 and the non-dominant language L2, but this can change during a person's lifetime (Van Coetsem 1995: 70, 2000: 52). The concept of dominance has been discussed by various scholars and opinions differ as to whether dominance always correlates with L1 or whether a person's linguistic dominance can change over time.

other hand, include linguistic domains that have less internal structure and consist of more individual constituents. In contrast to the stable domains, a speaker's use of this part of his language is less automatised and more conscious, and therefore it is more prone to change. The most representative example of the less stable domain is the lexicon of content words⁵. In sum, the implication of the stability gradient for the transferability of linguistic properties between different language systems is that lexical items are more easily transferred than phonology and syntax (Van Coetsem 2000: 31).

Van Coetsem's idea that the dominant language is always the 'agentive' and active language during the process of linguistic transfer was empirically paralleled, and thus supported, by Meuter's finding that in the bilingual individual the dominant language is always hardest to suppress. The concept of the stability gradient suggests that in a situation where imperfect suppression obtains, the most stable (unconscious, automatised) components are most difficult to block, and are therefore most likely to percolate into, and eventually be transferred to, the non-dominant language. This could explain why during the process of imposition (where the SL is dominant) relatively stable syntactic and phonological properties are kept and transferred to the RL due to imperfect suppression of the SL, whereas during borrowing (where the RL is dominant) these stable domains of the RL remain relatively unaffected and lexicon changes first.

3.1.4. SOCIAL FACTORS

While knowledge of the psycholinguistic processes in second language acquisition and bilingual first language acquisition is indispensable for an understanding of linguistic innovations, it remains restricted to the explanation of variation on an individual level. For individual language variation to lead to change, innovations need to be disseminated and established in the (wider) speech community. In other words, the use of a particular variant needs to extend beyond the individual into the domain of the community, and the mechanisms at work for the establishment and propagation of this variant extend from psycholinguistic mechanisms in the human brain to social factors at the level of the community.

⁵ But see e.g. Bybee (1992: 70) and Brown and Witkowski (1983: 84) for a different opinion on structuredness of the lexicon.

These include degree of bilingualism, duration of contact, and the perceived prestige of the language variant. This section summarises the key ideas of some approaches that promote the idea that social factors determine the outcome of a contact situation, and may overrule the linguistic or psycholinguistic constraints discussed above.

3.1.4.1 INTENSITY OF CONTACT (THOMASON AND KAUFMAN)

The most prominent landmark in this domain is beyond doubt Thomason and Kaufman's 1988 book 'Language contact, creolization and genetic linguistics'. In contrast to the structuralists and generativists who had dominated the field for a number of decades, the main message of this work is that it is not the structural properties of the languages, or the innate properties of Universal Grammar, that determine the way in which languages can influence each other, but rather it is social factors that shape the linguistic outcomes of a contact situation. Thomason and Kaufman certainly do not deny the role of structural linguistic factors altogether. They acknowledge that they may facilitate or inhibit the establishment of a linguistic change, but they emphasise that social factors can always overrule these linguistic constraints:

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. Purely linguistic considerations are relevant but strictly secondary overall. Ultimately, all the proposed structural constraints discussed in chapter 2 fail because linguistic interference is conditioned in the first instance by social factors, not linguistic ones. (Thomason and Kaufman 1988: 35)

This implies that, counter to the line of thought pursued by the structuralists, everything can in theory be transferred under favourable social conditions.

As far as the strictly linguistic possibilities go, any linguistic feature can be transferred from any language to any other language; and implicational universals that depend solely on linguistic properties are similarly invalid. (Thomason and Kaufman 1988: 14)

Both the direction of interference and the extent of interference are socially determined; so, to a considerable degree, are the kinds of features transferred from one language to another. (Thomason and Kaufman 1988: 35)

This does not mean, however, that Thomason and Kaufman think that contact-induced change occurs in a random way. On the contrary, they were the first to propose an analytical framework of contact-induced change that aims at explaining, as well as *predicting*, the kinds of change to be expected in a particular contact situation (Thomason and Kaufmann 1988: 46). However, instead of linking the possible changes to purely linguistic constraints, they argue that certain linguistic outcomes are generated by certain social situations, and that from this the linguistic outcomes can be used to reconstruct past social situations.

Thomason and Kaufman recognise that the social factors in a contact situation are too many, and that their interaction is too complicated, to build a comprehensive predictive model of contact-induced change. Accepting this as a fact, they consider it worth establishing correlations between a single social factor and its linguistic outcomes. In the model proposed in their 1988 book, they focus in particular on intensity of contact, which appears to play a significant role in different kinds of contact situations that they discuss.

The main dichotomy Thomason and Kaufman make is between social situations of language maintenance versus language shift. The term 'maintenance' denotes a situation where "the native language is maintained but is changed by the addition of the incorporated features" (Thomason and Kaufman 1988: 37). The linguistic process associated with such situations is borrowing, defined by Thomason and Kaufman as "the incorporation of foreign features into a group's native language by the speakers of that language" (ibid: 37).

Shift, on the other hand, is a situation of language contact where speakers give up their native language, and adopt the language of the people they are in contact with (the so-called target language). In this situation it is changes brought about by the shifting speakers in the target language that are in the focus of interest. The linguistic result associated with this scenario Thomason and Kaufman call interference through shift, or substratum interference, which refers to the changes introduced by these second language learners through imperfect learning. This may be caused by insufficient access to the target language, attitudes of the shifting speakers, or because the shift took place very suddenly. As soon as this 'imperfect' version of the target language becomes established among

the original speakers of the target language, then substratum interference can be said to have occurred.

The difference between these two contact situations is not the type of change that is possible in the language. As was mentioned before, Thomason and Kaufman see no linguistic restrictions on what can be transferred. The difference is rather the order and the extent to which different types of change take place in a situation of maintenance or shift. In a situation of maintenance this depends on the intensity of contact, which they describe as a cline from light to moderate to heavy. In a situation of shift, this cline refers to the degree of interference in the recipient language, which in turn depends on the size of the shifting group and the level of bilingualism. Although Thomason and Kaufman's model is much more nuanced than I can possibly be in this summary, a sketch of their model will give an idea of the essential points. In a maintenance situation, casual contact and little bilingualism leads to copying of non-basic vocabulary into the recipient language. When contact is moderate to heavy, the number and range of copied lexical items increases and is supplemented by structural copies as well. In a shift situation, the likely sequence of change is reversed. In this situation, the phonology and syntax of the target language are affected first by the substrate language. The lexicon may be influenced to some extent too, but this influence is not as pervasive. Lexical items from the substrate language may enter the target language because this language has no labels for certain concepts, for example foods, tools etc., or if the target language is not easily accessible to the group of shifting speakers. Thomason and Kaufman (1988: 50) note that interference through shift only occurs when the shifting group is relatively large and does not learn the target language perfectly. If the group of shifting speakers is small and they blend with the target language speakers, or if they learn the target language perfectly, they do not leave any trace in the target language. Thus, while in a maintenance situation the lexicon of the recipient (native) language will change first (with potential influence in the grammatical structures later on), in a shift situation the phonology and syntax of the recipient (target) language will show the influence of the source language first (Thomason and Kaufman 1988: 50). While Thomason and Kaufman do not give a psycholinguistic interpretation of this observation, it is strikingly similar to what Van Coetsem explained using the notion of the stability gradient (see Section 3.1.3.3).

To recapitulate briefly, the idea behind the stability gradient is that phonology, morphology and syntax are more stable than the lexicon due to their

inherent structuredness and the less conscious use of these domains by speakers. Essentially, the more stable elements are given up less easily in contact situations. Applying this to Thomason and Kaufman's hypotheses, this could explain why in a maintenance situation, in which the dominant (often native) language is preserved, the stable systems of phonology, morphology and syntax typically remain free from large-scale restructuring, whereas the less stable domain of the lexicon is affected first⁶. In a shift situation the same principle of stability applies, but leads to the reverse effect. Like in a maintenance situation, the shifting speakers also preserve the most stable part of their dominant language (phonology, morphology and syntax), but unlike a maintenance situation, their adherence to these stable systems initially inflicts phonological, morphological and syntactic changes on the target language. The lexicon of the target language typically remains relatively unaffected. A schematic representation of the interaction between the social setting, psycholinguistic mechanisms and their linguistic outcomes is provided in Figure 3.1.

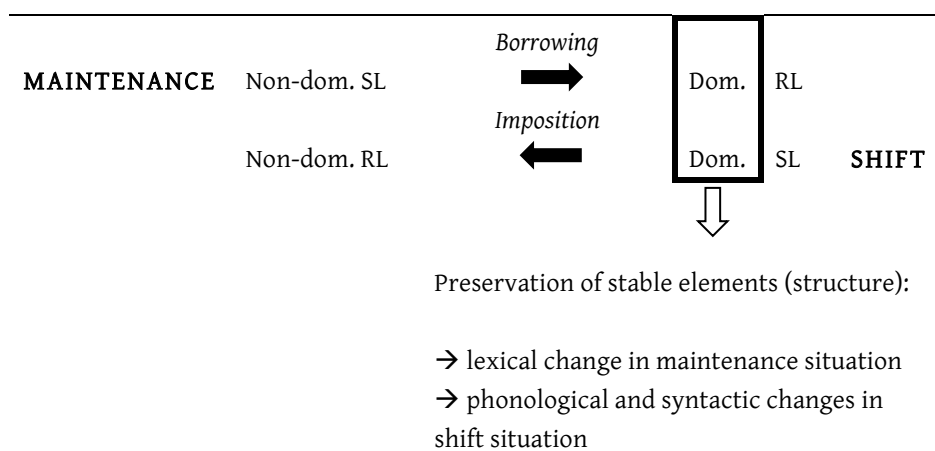


Figure 3.1: Interaction between social setting, psycholinguistic mechanisms and linguistic outcomes

⁶ But see Section 3.1.4.2 for a discussion of metatypy.

3.1.4.2 EMBLEMATICITY (ROSS)

While Thomason and Kaufman's model covers a large number of contact-induced changes, it does leave an important phenomenon unaccounted for. This is the situation where large-scale morphosyntactic restructuring takes place in a setting of language maintenance in a bilingual community. This process was labelled 'metatypy' by Ross and defined as

[a] diachronic process whereby the morphosyntactic constructions of one of the languages of a bilingual speech community are restructured on the model of the constructions of the speakers' other language. (Ross 2007: 116)

This new term was necessary to describe a contact setting not accounted for by Thomason and Kaufman's model, namely the structural reorganisation of a language in a maintenance situation. While in their model some space is reserved for structural borrowing, this does not represent the fundamental and system-wide typological change that may occur in contexts of long-term bilingualism (Ross 1996, 2007).

In metatypy, there is very little transfer of actual linguistic material between the languages in contact. Instead, the morphosyntactic or semantic organisation of the source language is transferred to the recipient language on a system-wide scale. As a result, the morphological material of the recipient language may look like its genealogical relatives, but its morphosyntactic and semantic structure, or 'type', may be closer to the contact language. This system-wide restructuring sets metatypy apart from phenomena such as grammatical calquing and borrowing, although these processes appear to precede metatypy and the boundary between them cannot always be clearly drawn (Ross 2007: 132).

The process can be illustrated most clearly with Ross's own, now classic, example of Takia, an Oceanic (Austronesian) language spoken on Karkar Island in Papua New Guinea, which has been restructured on the model of Waskia, an unrelated Papuan language spoken in the same area. The result is a word-by-word structural correspondence between Takia and Waskia, while the language material has clearly remained different. Example (3.1) shows that Takia differs in structure from Arop-Lokep, a closely related Oceanic language, and that it has adopted exactly the same structure as the genealogically unrelated language Waskia:

- (3.1) Arop-Lokep: *tool tamoto ma rima-na*
 man male and wife-his
 ‘a man and his wife’
- Takia: *ŋai tamol an ida*
 Waskia: *ane kadi mi ili*
 1.SG man DET with.him
 ‘The man and I’ (Ross 2007: 121)

It is obvious that this kind of large-scale restructuring can only happen in a situation of intense contact. However, the curious phenomenon that such intense contact has not led to concomitant lexical copies from Waskia into Takia, or to a situation where Takia speakers shift to Waskia, is often explained by assuming a high degree of ‘emblematicity’ of the metatypised language (Takia) (Thurston 1987, Crowley 2000, Ross 2007). In such cases, language serves not only the purpose of communication but also functions as an ‘emblem’ of a speech community. In other words, the native language carries high identificational value and is an important marker of identity. Therefore the native language is not given up easily in such settings and despite intense contact large-scale borrowing or shift is unlikely to occur. Metatypy, on the other hand, causes fewer problems, since the language forms (and thus the audible, and identificational part) are largely maintained, and only the structure is changed on the model of the contact language. Thus, the social situation associated with metatypy is a bilingual speech community, in which “speakers of the emblematic language(s) are a significant majority and where a variety of the inter-community language is used at least as much for communication among those speakers [i.e. speakers of the emblematic language E.S] as it is for communication with speakers of another language or of other languages” (Ross 2007: 131). According to Ross (1996: 182, 2003: 183), it is typically the emblematic language of a bilingual speech community that undergoes metatypy, but the other way round is also possible (2007: 130). It has been suggested that this process is motivated by the urge of bilingual speakers to use only one cognitive representation of a certain proposition (Sasse 1985: 84-85, 1990: 32, Ross 1996: 204, 2007: 134-135), and reduce the effort it takes to match meaning to form (see also interlingual identification 3.1.3.3).

3.1.4.3 SOCIO-SPATIAL FUNCTION AND ATTITUDE (THURSTON, ANDERSEN, WRAY & GRACE)

Thomason and Kaufman's model offers clear and straightforward correlations between intensity of contact and its linguistic outcomes, but they admit that their analysis of other social factors such as the degree of bilingualism, perceived prestige of the language variants, and attitudes of the speakers remains superficial. They justify this by saying that "these are as varied as the contact situations in which they are embedded" (Thomason and Kaufman 1988: 46), and therefore they consider it unrealistic to implement them into their model in any schematic way.

While it is true that social factors in a community are extremely complex, diverse and often unpredictable, other scholars have ventured into this domain, and tried to find regularities in the social mechanisms and group dynamics that underlie internally, as well as externally, motivated language change. Their research focuses in particular on the function of different languages within a speech community, and on how speakers consciously or unconsciously manipulate their language(s) to facilitate or impede communication. Thurston formulates this as:

People create new languages to be able to communicate with outsiders and change their languages to create barriers between themselves and their neighbours.
(Thurston 1989: 577)

With such statements, Thurston refutes the concept of language as an autonomously evolving organism that diversifies internally up to the point that a new language emerges. To model this idea, Thurston distinguishes between exoteric and esoteric languages. Exoteric languages are used for wider communication. They are meant to include as many speakers as possible in the group of speakers, the typical example being a lingua franca. They are used for inter-group communication and need to be easily learnable by in-group as well as out-group members. Therefore exoteric languages tend to be, or to become, structurally more simple and regular. The reverse applies to esoteric languages. Their primary sociolinguistic function is in-group communication, and according to Thurston, often even to impede communication with out-group members, thus making it an emblem of the speech community. In contrast to exoteric languages, the phonological, morphological and lexical systems of such languages tend to

become more complex over time, and consequently more complex for outsiders to learn.

A similar idea is expressed by Andersen (1988: 74) when he talks about open and closed dialects⁷. While Thurston's notions of exoteric and esoteric incorporate both the socio-spatial function of a language variety and the attitudes of the speech community towards language norms, Andersen prefers to separate these two aspects, using different sets of terms; namely 'open' versus 'closed', and 'exocentric' versus 'endocentric'. The opposition 'open' and 'closed' refers to the difference in socio-spatial function of languages. 'Open' languages are spoken in a community that maintains many relationships with other communities, whereas a 'closed' language is spoken in a community that has limited external links. The distinction between 'exocentric' versus 'endocentric' reflects differences in speaker attitude. In exocentric communities (also 'loose-knit' or 'outward-facing' elsewhere in the literature; see Ross 2003: 179, Wray and Grace 2005: 549, respectively), speakers have an accepting attitude towards influence from foreigners, including their languages, whereas 'endocentric' communities (also 'tight-knit' or 'inward-facing'; Ross 2003: 179, Wray and Grace 2005: 549, respectively) are less open to change of their existing language traditions. Thus, in Andersen's opinion, it is often not the actual amount of interlingual communication, but rather the collective attitude of a community towards language norms that has the most profound influence on the development of a language variety (Andersen 1988: 74).

Departing from the distinctions formulated by Andersen and in particular by Thurston, Wray and Grace (2005) further elaborate the notions of exoterogeny and esoterogeny. Like Andersen, they connect them to a particular social settings and speaker attitudes, but, innovatively, they also associate them with specific linguistic consequences. Exoteric languages are compositional, have transparent rules, and are regular and simple. In contrast, esoteric languages tend to be more formulaic, irregular and morphosyntactically opaque, which means that they must be stored in the brain in larger units, and are therefore harder to learn. According to Wray and Grace, these different ways in which languages develop is due to differences in socio-cultural dynamics. Esoteric languages can 'afford' to be formulaic, less transparent and less compositional because they are often spoken in communities in which the speakers have a high degree of shared knowledge.

⁷ Andersen's classification is based on the study of dialects, rather than languages, but he points out that the same principles apply for (un-)related languages (Andersen 1988: 75-76).

Wray and Grace even go as far as calling many of the actions and events in such communities ‘predictable’, in which case it is unnecessary to be overly explicit about everything linguistically. By contrast, the large number of out-group ties in exoteric communities requires detailed and explicit linguistic encoding, compensating for the lower degree of shared knowledge among speakers. Another important point that Wray and Grace draw on is the differing learnability requirements in these two kinds of communities. The inward-facing attitude of esoteric communities and their low number of links with outsiders imply that their language is unlikely to be learnt by many adult second language learners. This means that it need not fulfill the requirements of learnability demanded by highly analytic adult minds, and so not necessarily develop the analytic and regular structures that are likely to be introduced by adult second language learners. The language of an esoteric community is learnt mainly by children and as a first language. Since children are able to store language chunks in much larger units than adults, it is not a problem for more formulaic and irregular language structures to be maintained in these languages (Bolinger 1975: 100, Diessel and Tomasello 2001: 134, 136, Wray 2002: 105). The opposite is true for exoteric communities. The greater number of out-group links in this type of community implies that adult second language learners are a common phenomenon, and that native speakers have to adjust their ways of speaking in order to communicate with non-native speakers. This may lead to the development of more simple and regular structures. Equally, the language may be simplified and regularised by the second language learners themselves, as for example in a *lingua franca*.

3.1.5. FROM INNOVATION TO CHANGE

The previous two sections have shown that both the psycholinguistic mechanisms in the bilingual individual and the social setting in which a new language variant is embedded are essential factors for the understanding of contact-induced change. Considerable progress has been made in the study of these realms separately, but the connection between them has remained relatively unexplored. In other words, how does an innovation in the speech of an individual come to be established as a change within a speech community? This question applies to internally motivated as well as to contact-induced change, and is what Weinreich describes as the actuation problem:

Why do changes in a structural feature take place in a particular language at a given time, but not in other languages with the same feature, or in the same language at other times? (Weinreich et al., 1968: 102)

The answer to this question can clearly not be reduced to purely structural or psycholinguistic factors. Despite the lack of a clear-cut solution, promising insights into this issue are provided by social network theories, which became known most notably through the work of Milroy and Milroy (1985). In this article and similar studies, network theory is applied to account for the emergence and spread of language-internal innovations (Labov 1980, Milroy and Milroy 1985), but there is no stringent reason to assume that different principles apply in contact-induced change.

Another important factor that has been proposed to influence the origination and propagation of change is speaker age (Kerswill 1996, Ross forthcoming). It appears that certain types of change are associated with particular age groups and are unlikely to occur in others. Therefore age of speakers plays a significant role in the understanding of contact-induced innovations and change within a speech community.

3.1.5.1 NETWORK TIES (MILROY AND MILROY)

According to Milroy and Milroy (1985: 364), the emergence and propagation of linguistic change is governed primarily by the number and strength of the social network ties of an individual. They propose that weak social ties are crucial in the initial stages of an innovation, whereas strong network ties play a role in the propagation and establishment of the innovation, which could eventually convert the initial variation into an established change in the speech community. Milroy and Milroy elucidate this as follows. Weak ties are associated with superficial connections between individuals and they typically serve as ‘bridges’ *between* different social groups. A corollary of this superficiality is that a single individual can maintain a large number of such ties, but they have low identificational value. That is, weak ties are typically associated with individuals that occupy a marginal position in the social network, do not strongly conform to the social norms, and are therefore more open to innovation. The opposite is true for strong ties, which typically occur *within* social groups. Their intense character limits the number of

strong ties that a single individual can maintain, but such connections carry high identificational value. They are associated with individuals who occupy a central role in the network and that are typically norm reinforcing.

Transposing this to the domain of linguistics, this means that individuals with strong ties tend to use their language variety as a marker of the network to which they belong, and thus of their social identity. Since language is thus tied to identity and group membership, the conservative and norm-reinforcing character of strong ties makes speakers with such connections less likely to introduce linguistic innovations. It will be clear that weak ties are characteristic of inter-group relations, whereas strong ties promote cohesion within a social group. In contrast, the open character of weak ties and their association with inter-group relations, as well as the sheer number of them that an individual can maintain, establish the right conditions for the spread of language-internal, as well as for contact-induced innovations.

Against this background, Milroy and Milroy propose that initial innovations often occur in marginal individuals with many weak ties, who they call the innovators (Milroy and Milroy 1985: 367). However, for an innovation to spread through the community it is dependent on central figures with a network of strong ties, who they call the early adopters. Since these individuals are often personalities with strong identificational value for the group they are able to establish a new norm. Such speakers' use of a new language variant is crucial for its propagation and thus its establishment as an accepted variant across the speech community⁸.

Purely linguistic factors, the Milroys argue, may limit the possible range of innovations, yet they are not sufficient to explain patterns of diffusion of an innovation, and so to solve Weinreich's actuation problem. Occasionally linguistic factors may explain why a certain change took place (e.g. to avoid homophony) but they give no clue as to why other changes have not occurred, (e.g. instances of homophony that were not avoided; Milroy and Milroy 1985: 345). The answer to such questions must be searched for in psychological and social factors instead.

⁸ This differs from Labov's idea that the innovators are always people considered to have high prestige and with strong ties both inside and outside certain networks (Labov 1982).

3.1.5.2 AGE

Kerswill concludes with respect to this issue that everybody can, and does, continuously modify their language throughout their life, but *what* individuals are able to change and adopt in their language variety is to some extent determined by age (Kerswill 1996: 178). Based on the acquisition of English and Norwegian dialects, Kerswill proposes a hierarchy of dialect features relating to their difficulty to acquire. In this hierarchy, unpredictable phonological rules, new phonological oppositions and certain grammatical changes are the most difficult to learn and are only acquired early in life, varying from the age of 3 for unpredictable phonological rules to 13 for new phonological oppositions.

This is followed on the hierarchy by prosodic systems, which must be acquired before the age of 12-15 for a perfectly native-like performance, and by new morphological classes, the acquisition of which peaks during adolescence. Other changes such as morphologically conditioned changes, reanalysis, mergers, Neo-grammarians sound changes, lexical diffusion of phonological changes and the introduction of new vocabulary can be acquired during an individual's entire lifespan. Thus, children seem to be able to make any kind of change to their speech, whereas adults are much more restricted.

However, while children have the ability to take on any kind of innovation, in practice this does not happen on a large scale. Small children tend to imitate their parents closely, and the first divergence from this pattern appears in preadolescence (6-12 years), when the child's way of speaking comes to be more influenced by his or her peers than by the parents as he/she develops network ties beyond the core family. Despite the large potential for innovation in preadolescents, Kerswill concludes that it is adolescents who play the greatest role in the diffusion and establishment of new language variants.

Adolescents are clearly significant bearers of change; their networks allow them to have wider contacts than younger children, and their desire for a distinct social identity means that they are willing to modify their speech. (Kerswill 1996: 198)

A similar, but slightly different conclusion, is reached by Ross (forthcoming) in his discussion of the role of speaker age in grammatical restructuring. In accordance with Kerswill, Ross proposes that this kind of change is propagated primarily by adolescents. However, more explicitly than Kerswill he identifies preadolescents as the source of innovations (Ross forthcoming). Thus, while preadolescents can be

equated with Milroy and Milroy's innovators, the role of the early adopters is fulfilled by adolescents. This association of changes with certain age groups can be useful for the interpretation of contact-induced change and conversely for the reconstruction of the social situation in which it emerged.

3.1.6. SUMMARY

The previous sections have shown that factors from at least four different domains need to be considered for an explanation of contact-induced change. These domains, the factors and the hypothesised linguistic outcomes that were discussed in the previous sections are summarised in Table 3.2.

Table 3.2: Factors influencing linguistic outcomes of a contact situation

Domain	Factor	Hypothesised linguistic outcome
Linguistic structure	-Structural	Independent elements are transferred more easily than bound morphology
	-Typological	Grammatical structures can be transferred only between typologically similar languages
Bilingual individual	-Stability	Structured, automatised language parts (phonological, morphological, syntactic structure) tend to be more stable than the lexicon, and are therefore retained longer in contact situations.
	-Linguistic dominance	Dominant language is hard to suppress: RL dominance → borrowing (lexicon first) SL dominance → imposition (phonology and syntax first)
Bilingual society	-Intensity of contact	Influences the kinds and order of contact-induced change that tend to occur in situation of maintenance or shift
	-Emblematicity	May lead to metatypy
	-Function and attitude	Closed, tightknit communities → complexification Open, loose-knit communities

		→simplification
Position in society	-Network ties	Weak network ties → innovation Strong network ties → propagation of change
	-Age	Preadolescents and adolescents play a crucial role in innovation and change in contact situations

- 1) The structural and typological properties of the languages in contact: within the structuralist tradition the dominant view was that the structures of the languages in contact determine what elements can be transferred across the languages. While it may be true that transfer occurs more easily of morphologically independent elements and between typologically similar languages the number of counterexamples suggest that other factors can overrun these structural constraints.
- 2) The psycholinguistic processes in bilingual speakers with respect to both L2 acquisition and bilingual L1 acquisition were shown to play an important role in kinds of contact influence that are attested in their speech. In particular, language dominance appears to be crucial in the distinction between the processes of borrowing and imposition, and their linguistic consequences (Van Coetsem). It was discussed how language selection in bilinguals is dependent on the relative activation level of languages, and it was proposed that transfer takes place in cases of insufficient suppression of the dominant language (Meuter). This may happen involuntarily, depending on proficiency and/or the emotional and mental state of the speaker, or may be managed voluntarily depending on the partner in conversation (see Grosjean's language modes). In case of insufficient suppression of the dominant language, the stable (i.e. phonological and morphosyntactic) components of a language are preserved the longest. This leads to primarily lexical transfer during the process of borrowing, where the phonological and morphosyntactic systems of the dominant recipient language are preserved, and to phonological and syntactic transfer during imposition, where these systems of the dominant source language are copied into the recipient language.
- 3) Social factors are of great importance and can overrun the structural factors proposed under 1). In particular, intensity of contact was discussed, which influences the kinds of contact induced-changes, which tend to occur in a

situation of language maintenance or shift. In addition, emblematicity was identified as a factor that can prevent a community from shifting their language despite intense contact. This may lead to large-scale restructuring (or metatypic changes) in the emblematic language, yet with retention of the native lexicon. Finally, the socio-spatial functions of languages in the community (open vs. closed) as well as the attitude towards community norms (loose-knit vs. tight-knit) were discussed. It was claimed that language change in closed and tight-knit communities would lead to complexification and formulaic language use which is hard to learn for outsiders, whereas changes in open and loose-knit communities tend to simplify the system due to frequent interaction with outsiders.

- 4) Position in society (network ties) and speaker age were proposed to give insights into the processes by which innovations spread. Innovators were characterised as individuals with many weak network ties, while the propagation of an innovation is carried out by early adopters, who are central figures in the community with stronger, but fewer network ties. The acquisition of different kinds of linguistic variants was shown to depend on speaker age (Kerswill 1996), and it was suggested that for some kinds of change, at least, preadolescents are the likely innovators, while the role of early adopter is fulfilled by adolescents.

3.2. THE ROLE OF THEORY IN LANGUAGE CONTACT STUDIES

The theoretical approaches summarised above provide only a snippet of the available literature, yet their diversity shows that scholars in the field of contact linguistics are still far removed from a consensus on one all-encompassing theory of contact-induced change. This is as confusing as it is understandable, given the complex character of contact situations, and it is questionable whether it will ever be possible at all to formulate a single all-encompassing model which explains and predicts contact-induced change (Thomason 2010: 33). Since this is an unsatisfactory situation in research, this section will illuminate some of the reasons and justify to some extent why the study of contact-induced change is incompatible with the requirements of a predictive scientific theory in the strictest sense.

Most generally, a theory is intended as a model of reality. However, their hypothetical nature implies that theories can always be falsified and never be proven. Therefore we can never guarantee with certainty that a theory correctly reflects reality. Nonetheless, some theories are more robust than others. It has been proposed that a 'good' theory should be: a) explanatory; b) predictive; and c) testable (Hawking 1988: 11). The formulation of such a theory is always a demanding task, but the multifaceted character and non-reproducible nature of social and linguistic contact situations make the formulation of an all-encompassing theory particularly challenging within this domain.

It will be clear by now that the discipline of 'language contact' is in fact itself multidisciplinary. Since language is an important means for linking a person's inner world to the outside world, it cannot be emphasised enough that the underlying motivations for the linguistic outcomes of a contact situation cannot be fully understood unless psychological, sociological, anthropological, and historical aspects are taken into account besides linguistic factors.

Both internal and external motivations are needed in any full account of language history and, by implication, of synchronic variation. Progress in contact linguistics depends, in my opinion, on recognizing the complexity of change processes — on resisting the urge to offer a single simple explanation for all types of structural change. (Thomason 2010: 31)

The paradox of the desire for a theory of contact-induced change is that the scientifically uncontrollable interplay of all these factors is in disagreement with the nature of theories themselves to represent reality in a schematic and predictable way. This problem applies in particular to the aforementioned criteria of predictability and testability. To achieve these criteria, a clear cause and effect must be identified in the observation for which the theory accounts. However, as we have just seen in the quote from Thomason, the linguistic outcomes of a contact situation often require an explanation in terms of multiple causations and the sheer number of potential factors makes prediction of the way they will interact and the exact repercussions this will have on language an unrealistic goal (Thomason 2001: 61, 2003: 709, 2010: 33).

Another issue is the variable nature of the operating factors. While some tend to be stable (e.g. morphological paradigms), others have the potential to change within a brief period of time. This applies to important factors such as speakers' attitude towards a language variety, which may be affected by circumstances such

as social, economic or political development, or even by the appearance of a single prominent individual, and is therefore inherently unpredictable.

Conditions with respect to testability are not any more favourable. In order to corroborate the validity of a theory, it is necessary to test hypotheses through replication of the study. Ideally, one should be able to control the setting of the study and vary individual factors to see which factor is decisive in the emergence of the observation under consideration. However, in language contact the attainment of both these goals is unrealistic. First, no two naturally-occurring contact situations are exactly the same, and it would be unethical, as well as technically impossible, to create them artificially. Therefore, it will never be possible to perform an exact replication of a study to test if the linguistic outcomes would be same. But even if it were possible to do this, the problem remains that one can never be entirely sure that all relevant details of the contact situation were recorded, or even known. Even if a theory makes sense on the basis of the available information, we cannot be sure that some other crucial factor that we have missed did not also play a role in the linguistic outcomes. Finally, we should not forget chance. Some linguistic changes to which we assign theoretical significance may in reality have occurred by chance (Butters 2001: 201).

Given this background, the conclusion among contact linguists that it is unrealistic to aspire to the criterion of predictability is no surprise. Rather, one should accept the fact that contact-induced change can only be observed and explained after the event. This is well formulated by Thomason:

In spite of dramatic progress toward explaining linguistic changes made in recent decades by historical linguists, variationists, and experimental linguists, it remains true that we have no adequate explanation for the vast majority of all linguistic changes that have been discovered. Worse, it may reasonably be said that we have no full explanation for any linguistic change, or for the emergence and spread of any linguistic variant. The reason is that, although it is often easy to find a motivation for an innovation, the combinations of social and linguistic factors that favour the success of one innovation and the failure of another are so complex that we can never (in my opinion) hope to achieve deterministic predictions in this area. [...] The realistic goal is a deeper understanding of processes of change, not an ultimate means of predicting change. (Thomason 2010: 33)

However this does not mean that the field of contact linguistics cannot be advanced at all. While the desire to formulate strict *laws* of contact-induced change may be too far fetched, there is certainly agreement on *tendencies* as to

what is more or less likely to happen in particular contact situations. That is, a theory of contact-induced change should be able to explain, but not necessarily be able to predict, the outcomes of a contact situation.

To conclude, theories in language contact studies have a status of their own and should not be compared to theories in the strictest sense of the term, which requires the fulfilment of the three criteria mentioned above. Explanations and predictions should be formulated in terms of ‘probabilities’, rather than ‘laws’. Theories of language contact should be seen as guidelines in the reconstruction of social settings in the past, as well as in the prognosis of probable outcomes of contemporary contact situations, but not as a rigid framework that does not allow for exceptions.

3.3 TERMINOLOGY

The diversity of theoretical approaches in language contact studies is mirrored by an equal diversity of terminology. Therefore I will specify the set of terms and their meanings that have been chosen for use in this dissertation.

The term *COPY* is used to refer to any kind of linguistic material that is inserted in one language from another (see Johanson 1992: 175, 2002a: 8, 2002b: 287). Within this category, *FULL COPIES* denote form-meaning units that are adopted wholesale into another language (e.g. concrete morphemes and their meanings), whereas *COPIES OF FORM* and *COPIES OF STRUCTURE* represent cases where only a subset of the properties of the item in the source language is copied into the recipient language. Copies of form refer to the insertion of linguistic forms (or substance) from the source language into the recipient language, whereas copies of structure designate cases where only structural features (and no linguistic forms) are copied. Structural features may refer to semantic, morphological or syntactic structure, as well as frequential or combinatorial properties of linguistic items⁹.

Regarding the processes involved in contact-induced change, the most neutral labels to refer to the spread of linguistic material from one language to another is *COPY* or *TRANSFER*. Regardless of the nature of the copied material or of

⁹ Cf. Johanson’s (1992, 2002) classification of ‘global’ vs. ‘selective’ copies, whereby global copies largely overlap with what I call full copies, and selective copies include both copies of form and copies of structure.

the underlying process, transfer always takes place from a SOURCE LANGUAGE into a RECIPIENT LANGUAGE (Van Coetsem 2000: 49).

However, it is more informative to categorise copies based on the prevailing sociolinguistic and psycholinguistic factors in the contact setting. Following Van Coetsem, I will use BORROWING for the process where linguistic material is copied into the recipient language due to recipient language agentivity, and IMPOSITION when this happens due to source language agentivity. The difference in agentivity is determined by a difference in linguistic dominance of the bilingual speaker: in borrowing, the speaker's dominant language is the recipient language, and copies are transferred into this language from their non-dominant source language. In imposition, on the other hand, the speaker's dominant language is the source language, and copies are transferred into the speaker's non-dominant recipient language.

Linguistic DOMINANCE is defined as the difference in the bilingual speaker's degree of proficiency between his two languages (Van Coetsem 2000: 32). While some authors equate linguistic dominance with L1 automatically (e.g. Lucas 2012: 277-278), I agree with Van Coetsem's idea that in certain situations a person's relative proficiency, and thus his dominant language, may change during his lifetime (for example, migrants who have left their own country and subsequently use the language of their new homeland (their L2) much more than their mother tongue (L1). If such a situation continues for long enough, the L2 will become much more active in the brain than the L1, and the speaker can legitimately be called dominant in his L2.) In addition to borrowing and imposition, there is METATYPY, which refers to a situation where a language, often emblematic for the speech community, undergoes large-scale restructuring as a result of long-term bilingualism and intense contact with another language.

One final relevant process that deserves mention is language ATTRITION. While there is some difference in its definition, there is general agreement that

attrition is a gradual process in which a language recedes as it loses speakers, domains, and ultimately structure; it is the loss of linguistic material that is not replaced by new material. (Thomason 2001: 227)

Attrition is also a part of contact-induced change, but its character is different from borrowing and imposition in that the linguistic consequences are indirect. The changes do not necessarily make the affected language more similar to the other language and there is not necessarily transfer of substance or schematic

copies. However, the changes would be less likely to occur outside the contact situation (Thomason 2003: 688).

Attrition occurs when a language loses ground as the result of a shift to a different language by a speech community, and it may eventually lead to language death. The loss mentioned above applies to all linguistic domains and the changes are characterised by simplification of the system of the dying language. Loss of vocabulary is observed in certain domains, often as a corollary of the loss of cultural practices or traditional knowledge. Therefore it tends to start in marginal domains and gradually proceeds to the core lexicon of the dying language. The most characteristic symptom of attrition, however, is structural simplification. This applies to the phonological system as well as to morphology, syntax and even discourse structure. This often comes to the fore as generalisations of rules, leading to a reduction of irregularities, the merger or elimination of phonological or morphosyntactic categories, the replacement of morphologically complex by analytical constructions, and the loss of complex syntactic constructions.

It is not easy to prove whether a change is the result of attrition or whether it is simply a language-internal development. Lexical loss and replacement by foreign lexical items also occur in situations of borrowing, and structural simplification is also a natural tendency in languages that show no signs of attrition.

Therefore before any generalisations are made, every situation needs to be treated separately, carefully taking into account the social situation, and leaving open the possibility of multiple causation in the explanation of contact-induced change (Thomason 2001: 232).

