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**MIGRATION, LANGUAGE
AND INTEGRATION**

AKI Research Review 4

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Migration, Language and Integration: the AKI Research Review in brief

Language as the key to integration

The focus of this AKI research review is the significance of language for the integration of immigrants into host societies. The background is the emergence and consolidation of ethnic strata in virtually all immigration countries and the suspicion that certain deficits in terms of the command of the relevant national language play a particularly significant role – albeit not exclusively or independently of other possible influences, like, for example, social distances or discrimination. Because it fulfils a number of functions, language has a particularly significant role to play in the process of individual and societal integration. It constitutes both the medium of everyday communication and a resource, in particular in the context of education and the labour market. Furthermore, languages and accents can act as symbols of belonging or foreignness and give rise to differentiation and discrimination. Inequalities in terms of access to education, income, central institutions, societal recognition and social contact are significantly, although not exclusively, determined by linguistic competence in the relevant national language. This alone gives rise to a strong interest among immigrants in the acquisition of the respective national language, and when the corresponding preconditions are fulfilled, this goal is frequently achieved – at least over the course of generations. Like cultural diversity in general, linguistic diversity can lead to innovative stimulation and inter-cultural exchange, on the one hand, but can also give rise to problems of understanding and coordination, on the other, for example in the context of work situations or social contacts. Thus, linguistic pluralism always triggers the need for a general communication medium which can usually be fulfilled through the teaching and acquisition of the relevant national language (or a generally valid lingua franca, which English has now become). This may also give rise to processes of linguistic adjustment which may, however, be hindered or entirely blocked by certain circumstances.

General agreement on the mechanisms and social conditions of language acquisition

The main concern of this research review is to identify the mechanisms, social conditions and consequences of the acquisition of the host society's language and the retention or loss of the language of origin. Given that the various academic disciplines that deal with language acquisition work on basic assumptions which are similar in substance, their perspectives may be incorporated into a single general theoretical model. Language acquisition and language retention are understood here as the outcome of the interaction of immigrants' activities or learning, on the one hand, and certain social conditions, on the other. The learning of the new language depends on four basic factors: motivation (e.g. the prospect of increased income), access (e.g. opportunities for contact or availability of courses), skills (e.g. general intelligence or particular ability to learn languages) and the costs associated with learning (e.g. time involved, pressure to assimilate). The empirical basis of this research review is mainly provided by the results of multivariate statistical analyses of representative data sets from scientific and official surveys carried out in different

immigration countries, i.e. in particular the USA, Australia, Canada, Great Britain, Israel, and Germany. Despite the different migration and integration policy traditions that prevail in these countries, the findings for them are largely uniform.

Conditions of national language acquisition

The acquisition of the national language as the immigrants' second language is influenced by a range of factors. These include conditions in the country of origin and immigration country, the existence and structure of an ethnic community and – in particular – individual and family living conditions and the specific circumstances of migration. Age at migration and the duration of stay in the country of migration are particularly significant factors; the parents' age at migration and language skills also play an important role in the case of immigrant children. A higher level of education of immigrants or their parents constitutes a clear advantage when it comes to second language acquisition. As opposed to this, significant linguistic distance between the first language and the language to be acquired, a high level of global usability of the first language (in particular English) and presumably strong socio-cultural distances (xenophobia) between the immigrant group and the majority society can inhibit the second language acquisition by immigrants. The acquisition of the language of the receiving country is hindered in particular by a high level of ethnic concentration in the neighbourhood, intra-ethnic contacts and opportunities for communication in the language of origin in the neighbourhood and the availability of media in the language of origin. Children learn the language of the receiving country more easily and a clear threshold can be empirically identified in terms of second language acquisition at between 10 and 12 years of age. This is not to say that competent language acquisition is impossible after puberty (even from a neurophysiological perspective), but considerable effort and motivation are required to achieve a high level of proficiency and accent-free speech in adulthood. No suitable empirical studies have been carried out on the effects of (state-ordained) language courses, thus it is not possible to make any reliable statements in this regard.

Competent bilingualism remains exceptional

A clear trend for monolingual assimilation can be observed across generations of immigrants throughout the world. Competent bilingualism, i.e. the command of both the language of origin and the national language at a high (oral and written) level, will remain exceptional. The reason for this is that the conditions that promote second language acquisition are usually detrimental to the retention and competent command of the native language and vice versa. Thus, the more advanced the age at which immigrants enter a country and the greater their integration into the ethnic context, the more likely it is that they will retain their mother tongue and the less likely it is that they will successfully acquire the national language.

A good knowledge of the national language is central to educational success

School performance is both directly and indirectly associated with linguistic competence and this means that proficiency in the national language and language of instruction is crucial. This applies irrespective of the effects of other factors on the educational opportunities of immigrant children, such as enrolment in pre-school education, the choice of school, family circumstances and direct or indirect discrimination within the educational system. The conditions that have a positive influence on school performance in language-related subjects are generally the same as those that promote second language acquisition, i.e. a low age at migration and a higher level of education of the parents. At the same time, the school achievement of children and young people is particularly badly affected if learning takes place in schools and classrooms with a high proportion of students who do not speak the national language. Additional competence in the language of origin has no discernable influence on school achievement, and empirical research has yet to confirm that bilingual education has a particular effect on national language acquisition and school achievement.

Unfavourable conditions are mutually reinforcing

Unfavourable conditions, such as ethnic concentration in neighbourhoods and (primary) schools, advanced age at migration or low level of parental educational attainment, are mutually reinforcing in their negative effects. Unfavourable conditions in the wider environment are particularly disadvantageous to immigrant children with already problematic family situations. However, immigrant children who are at such a multiple disadvantage benefit in particular from the improvement of individual circumstances, for example in terms of learning conditions in (primary) school. Therefore there are ways of terminating this spiral of mutually reinforcing negative conditions. Yet, such improvements in the situation of immigrant children can result in the loss of some of the (relative) advantages enjoyed by privileged native children which arise from the fact that they usually attend (primary) schools with low levels of immigrant children. Thus, problems of acceptance could arise among the native population if a more extensive ethnic mixing of schools and classrooms were to be proposed with a view to avoiding the particularly high ethnic concentration and isolation of immigrant children in (primary) schools which is responsible for a significant number of the problems faced by immigrant children, in particular those from disadvantaged family backgrounds.

Knowledge of the national language has a decisive influence on occupational opportunity

In addition to the central factors of educational level and professional experience, comprehensive skills in the national language is extremely important for the labour market integration of immigrants. A lack of language skills clearly reduces their chances of actually finding work and attaining a higher position and is associated with significant reductions in income. The greater the extent to which an occupation involves communication and coordination and, in particular, if the immigrants' mother tongue has a low use value on the global labour market, this is all the more applicable. Anyone who does not have a comprehensive command of the national language will be unable to make full use of their valuable occupational experience and knowledge. On the other hand, the conditions conducive to labour market integration – for example, high level of education and proficiency in the national language – reinforce each other. (“Statistical”) discrimination by employers who fear increased transaction costs due to accents or underestimate the professional skills of applicants and refrain from employing immigrants “as a precautionary measure” can all contribute to the deterioration of the professional situation of immigrants. They may then refrain from applying for positions within the host society's labour market, especially if alternatives are available in ethnic niche economies. As a result of their (“exclusive”) integration into intra-ethnic networks and lack of language skills they may even be excluded from information and relations which could provide access to employment opportunities.

Bilingual skills do not (generally) pay off

Beyond the effect of mastering the language of the immigration country, the bilingual skills of immigrants, i.e. the command of a mother tongue in addition to the language of the immigration country, are largely irrelevant in terms of school achievement and labour market success. The only exception here concerns the linguistic skills in demand in specific market segments and the knowledge of English in general. Canada's multilingualism policy has shown that the upgrading of a language (in this case of French) can have perceptibly positive effects on the labour market. However, this only applies to the established population in the Francophone provinces. Immigrants with “non-official” languages basically face the same problems in Canada as they do elsewhere and these deficits can only be reduced through adaptation to the relevant regional language. However, even if they speak one or both of the official languages (i.e. English and French), they still face significant disadvantages.

Ethnic resources largely insignificant when it comes to educational and labour market success

In general, and even in the context of a stronger transnational character of migration processes, the observable empirical relationships confirm the outstanding importance of the given institutional and cultural conditions of the relevant immigration country for (intergenerational) integration in all three areas of language, education and labour market. As opposed to this, there are few indications that ethnic resources, such as retention of the

language of origin, bilingualism or access to ethnic networks, play a significant role in the structural integration of immigrants. Stronger ethnic ties and exclusive intra-ethnic relationships tend to hinder integration and can at best attenuate existing disadvantages in situations in which the relevant groups, ethnic enclaves and markets are sufficiently large. However, ethnic resources do not constitute an effective counterweight to ethnic stratification arising from linguistic and other deficits.

Some differences between immigrants of different origin have not yet been clarified

It has not yet been possible to fully explain some of the differences between the educational and labour market opportunities of certain groups on the basis of the aforementioned pivotal factors. In the German context, this applies to the position of Turkish immigrants, which is still relatively weak. In the USA it concerns in particular the disadvantages experienced by Mexican (and most other Latin American) immigrants, and the educational and labour market success of Asian immigrants. It is possible that a coincidence of specific conditions is involved here, such as the maintenance of transnational contacts, extensive linguistic, social and cultural distances, large ethnic networks and the varying estimation of education. This subject requires further clarification.

Intergenerational integration, linguistic pluralism and ethnic differentiation

Despite the various differences, however, it is possible to observe a clear trend for linguistic assimilation among all ethnic groups over the course of generations – and, as a result of this, increased educational and labour market success. At the same time, ongoing migration processes can give rise to the constant or even increasing presence of immigrants who do not speak the national language. Thus a situation may evolve which is characterized by the permanent coexistence of linguistic and other forms of integration into the host society (down through the generations), on the one hand, and linguistic pluralism due to the presence of appreciable numbers of people with deficits in the national language, on the other. This is the normal case in immigration countries as they are experiencing increasing international migration. The openness of the host societies – which varies in scope in accordance with the above-described conditions – and of ethnic communities to the process of (linguistic and other) inter-generational integration is of crucial importance for the long-term social integration of immigrants, the nature of the ethnic differentiation and inequality in the relevant host societies.

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1. The Problem

One of the most obvious consequences of international migration is the emergence and consolidation of *vertical* ethnic inequalities in the various immigration countries in which ethnic and cultural characteristics are systematically associated with inequalities in education, income, access to central institutions and societal recognition.¹ They arise in almost all immigration countries and emerge in association with the most varied migration, integration and minority policy conditions, public discourses and legal status of immigrants as found, for example, in Belgium, Australia, Germany, France, Great Britain, Israel, Canada, the Netherlands, Sweden, Switzerland and the USA (on this point, cf. Chapters 6.2 and 6.3). Such trends can also be observed in most of the newer destination countries of international migration such as Greece, Italy, Portugal and Spain. Vertical ethnic inequalities are also referred to as *ethnic stratifications* (cf. Chapter 2). Insofar as these differences cannot be explained by qualifications which are of relevance to the labour market, in particular educational attainment and work experience, ethnic stratifications are defined through systematic differences between ethnic groups in terms of labour market success. Such residual differences could, of course, be related to other generally unquantified background characteristics which are also relevant to the labour market, such as other skills or motivations, as well as social distances and the discrimination of ethnic groups on the labour markets in question. As opposed to this, another possibly more likely cause – at least in the case of competitive labour markets – could relate to certain deficits in the immigrants' *language* proficiency which either hinder or reduce the use of the available human capital on the labour markets. Indeed, language deficits can already play a role in the acquisition of the human capital relevant to the labour market, in particular school performance and the associated school career, thus language can have both direct and indirect influence on labour market integration.

► **Basic question: connections between ethnic stratification and the language proficiency of immigrants**

The decision to compile this AKI Research Review 4 on the links between migration, language and integration was based on the outstanding significance of language in the integration of immigrants. Although this significance is (now) virtually uncontested (cf. Unabhängige Kommission "Zuwanderung" 2001, p. 259 ff.; Sachverständigenrat für Zuwanderung und Integration 2004: 253 ff.; Beauftragte der Bundesregierung für Migration, Flüchtlinge und Integration 2005: 18 ff.), there is very little consensus as to the mechanisms

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and social conditions at work here, for example the importance of age at migration or ethnic concentration in the home environment and schools, the advantages of bilingualism for school and labour market success, the effectiveness of multilingual policy as adopted, for example, in Canada and the language and integration courses that have been introduced in Germany for both new arrivals and immigrants who have been in the country for some time and of programmes for multilingual education in schools. The compilation of an overview of the research situation was (and is) impeded – in this area more than others – by the fact that the topic of language acquisition and its consequences are studied by very different and often highly segmented (social) scientific disciplines, such as linguistics, (social) psychology, education, sociology and economics, and the debate surrounding it is rarely free of normative prejudices and politically motivated sensitivities. In many cases, this has given rise to gaps in the knowledge of the problem within the individual disciplines as well as unnoticed and unexploited concordances. Thus, one priority objective of this AKI Research Review 4 is the elucidation of the – often far from obvious – concordances between the disciplines so as to enable the establishment of the most comprehensive and integrative concept possible of reliable findings in this area and, based on this, to clarify in a general, systematic and reliable way the close correlations between language acquisition, school and labour-market success and other aspects of integration, such as social contact and the organization of everyday action. In order to do justice to the complexity and visible breadth of this topic, a more comprehensive and detailed study was compiled in addition to this AKI Research Review 4. This study can also be consulted for more detailed information on individual issues (Esser 2006).

This exploration of the links between migration, language and integration begins with a presentation of some basic conceptual and theoretical information on the classification of the linguistic dimension within the problem of the integration of immigrants in general (Chapter 2). The next section presents a theoretical explanation of (second) language acquisition by immigrants and its most important empirical correlations (Chapter 3). Against this backdrop, Chapter 4 deals with the specific processes and conditions behind the emergence of (competent) bilingualism and discusses some of the – in part still unresolved – debates surrounding this issue. Chapter 5 examines the background of the deficits in language-related school performance and its significance in the context of overall school performance and school career and also the effectiveness of bilingual education programmes. Finally, Chapter 6 deals with the importance of language proficiency for positioning and (income) success on the labour market. Some of the specific features of language which are explored in detail in the longer study are briefly presented here, for example the calculation of what is known as the “Q-value”, a measure for the determination of the communication value of languages, and the problem of subjective assessments as measures for language proficiency; a more detailed account of these phenomena can be found in the detailed study. The AKI Research Review 4 ends with a brief summary of its main findings (Chapter 7).

This AKI Research Review 4 is mainly based on theoretical and empirical studies which allow for assessing the social conditions of (second) language acquisition and the emergence of (competent) bilingualism and their effects on educational and labour market

success on a *systematizing* and *explicitly theoretical basis* and in a way that is *empirically provable*, *generalisable* and statistically *validated* and, preferably, *without misspecifications* in the empirical identification of the effective *causal* relations, for example through the omission of relevant factors and conditions (cf. also reference to the studies used in the introductions to Chapters 3 to 6).

The issue of “Migration, Language and Integration” was initially approached on the basis of research carried out on the pertinent research databases and literature collections. Because the information obtained in this way did not necessarily lead to the studies that were of use and relevant to the above-defined task, the next step involved, as far as possible, the evaluation of (preferably recent) systematizing overviews, i.e. state-of-the-art type reviews and overviews contained in anthologies, of the different thematic issues (second language acquisition, bilingualism, educational and labour market success). The background to this approach, which was quite targeted and systematic from the outset, is directly linked with the main objective of the AKI research reviews: i.e. the theoretical modelling of the relevant assumable generating mechanisms – which goes beyond orientation hypotheses, impressions from individual studies and illustrations based on individual findings – and the documentation of sound and, where possible, generally verifiable empirical correlations – also in comparison with theoretical modellings and across various national, cultural and historical contexts. Thus, the studies, on which the following systematizations are based, do not represent a complete survey or random selection based on all of the available titles, but a targeted selection based on explicit theoretical and methodical perspectives (cf. especially Chapter 2). In particular, contributions that were limited to selective accounts or bivariate relations that were not statistically controlled, for example involving individual cases of successful second language acquisition even at an advanced age, or the effects of integration into an ethnic community that supposedly promote integration, are only considered in exceptional cases, particularly if they appear to contradict the systematically obtained findings or are adopted as proof of hypotheses which are not covered by the systematic findings. Thus, studies with (very low) sample sizes, with clearly systematically skewed samples –, in particular if the distortion related already to the dependent variable as is often the case in so-called qualitative studies – and studies which were lacking control groups and did not include adequate multivariate statistical control of the relevant background variables were normally not included in the review. In view of this, what remained were the relatively few studies which are presented in the introductory paragraphs of the main chapters of this report (i.e. Chapters 3 to 6) and which represent (almost) all of the relevant ascertainable studies on the topics in question. Contrary to what might be expected, this approach, which might appear selective from an unsystematic perspective, does not necessarily result in a “distortion” of the final results reported. In fact, the opposite is the case: no number of merely descriptive or misspecified studies could “override” or even replace the one (and possibly only) study that fulfils the necessary criteria and is able to demonstrate the causal relations sought (within the bounds of possibility). The main problem with the studies deemed unsuitable from the perspective of the AKI Research Review 4 is that none of their findings are usable and can only give

► A comprehensive theoretical model and its empirical substantiation through analyses of representative data sets

rise to misleading impressions. Thus, the main advantage of even a single study that has been carried out in accordance with the rules of empirical social research is that – if at all – it will provide the reliable results sought *on its own*.

The lack of clarity and controversial views (cf. above) that continue to characterize the debate surrounding the conditions and consequences of language acquisition by immigrants are due – not least – to the fact that the necessary requirements are not always fulfilled by the empirical evidence on which the views in question are based. The history of the evaluation of the conditions for the acquisition of a second language or (competent) bilingualism and its effects on the (structural) integration of immigrants is a classic example of how selective accounts of individual cases and unsuitable study designs can lead to often enduring and sometimes very costly misjudgements (on this point, cf. in particular Chapters 3.3, 4.3, 5.3 and 6.3). Thus, the main concern of AKI Research Review 4 is to provide as comprehensive as possible an account of the *reliable* status of research (in accordance with the aforementioned criteria) on the four substantive areas – i.e. the conditions for second language acquisition and (competent) bilingualism and their respective effects on educational and labour market success – so that practical measures may be implemented to counteract ethnic stratification on a more solid informational basis than has hitherto been possible. If there seem to be deviations from initially reliable or seemingly obvious findings, for example in relation to the question of the effect of ethnic concentration on (second) language acquisition or the effect of state-ordained language and integration courses (cf. Chapters 3.2 and 3.3), the so-called “critical period hypothesis” in relation to the significance of age at migration (cf. Chapter 4.3), the effectiveness of programmes for bilingual education (cf. Chapter 5.3) or the supposition concerning the helpful effects of ethnic resources such as ethnic networks and the frequently assumed special role of Canada (cf. Chapter 6.3), particular attention is paid to whether these are actually “stable” exceptions, whether they incorporate inexplicable contradictions or whether it is possible to comment on them at all on the basis of the available studies and findings.

As far as was (technically) possible, reference was made to suitable data sets and targeted analyses were carried out so as to broaden the basis for the clarification of such controversial issues, in particular when the published results were incomplete or appeared to contradict other available evidence. The databases used for this purpose include the German Socio-Economic Panel Study (*Sozio-ökonomische Panel/SOEP*; for a description of the study, cf. p. 103 and Wagner, Schupp and Rendtel 1994; Schupp and Wagner 2002), the American “Children of Immigrants Longitudinal Study” (CILS; for a description of this study, cf. p. 102 and Portes and Rumbaut 2001: xxi ff. and 287-347), the German PISA 2000 study, insofar as it was made available by those responsible for the project (*PISA 2000-Studie*; for a description of this study, cf. p. 102 and Deutsches PISA-Konsortium 2001) and the data set from a German Research Foundation study (Deutsche Forschungs Gemeinschaft/DFG) carried out in the 1980s on an intergenerational and intercontextual comparison of the integration of immigrants (KITTY; for a description of this study, cf. p. 102 and Esser and Friedrichs 1990: 20 ff.). In more than one instance, the re-analysis of these data sets led to the correction of assumptions which have been viewed as entirely

plausible or obvious in both the academic and public debate on the basis of numerous individual impressions or misspecified analyses (on this point, cf. Chapters 3.2, 3.3, 4.2, 5.2 and 6.3).

Although this AKI Research Review 4 primarily relates to the situation in the Federal Republic of Germany, as far as possible all (suitable) studies from other (receiving) countries were included in the systematization and substantiation of the results. In fact, the references to non-German studies tend to predominate. There is a simple reason for this: there are very few suitable studies that deal specifically with the situation in Germany. However, the comparatively copious findings on the other receiving countries are also highly relevant to the assessment of the situation in Germany: the stability of the findings, the reliability of the empirical correlations and the cogency of the theoretical modellings can only be established through international and intercontextual comparison, and if a correlation that can be expected on a theoretical basis is empirically confirmed in any other country, this would indicate that it is generally applicable even if there is no specific German study on the issue in question or the data situation is inconsistent.

► Examination of the reliability of the causal relations in Germany and other immigration countries

The most important and – given the controversial nature of the debate up to now – somewhat surprising finding was the almost overwhelming convergence and uniformity of the central correlations across the different contexts and, indeed, in all four areas studied. While it is also possible to observe certain exceptional trends and differences, for example in relation to the magnitude of second language acquisition, linguistically determined educational success and labour market integration, based on national, institutional and cultural contexts (on this point, cf. the so far most comprehensive international and interethnic comparative study by van Tubergen 2004), as compared with other parameters, such as, in particular, family and migration biography and the everyday environment, these effects tend to be rather weak and for the most part hardly (causally) attributable to certain characteristics of the institutional context. However, this does not mean that practical political and institutional measures aimed at the improvement of second language acquisition or the educational opportunities of immigrants/immigrant children do not have any effect at all. Based on everything that is emerging, however, these are rather conditions on the (micro) level of everyday circumstances, such as ethnic concentration and the quality of the immediate living environment, the situation in the (pre-) schools and, in particular, the ethnic concentrations that prevail there. As opposed to this, based on all the evidence that emerges on this point from the systematic studies and international comparison, the “macro” contexts, for example the general migration and integration policy of the receiving countries and the public discourses surrounding it, appear to be far less significant, if at all.

For reasons of space, for the most part, this AKI Research Review 4 deals only with the theoretical and empirical connections within the areas of educational inequality and inequality on labour markets referred to in the context of ethnical stratification to the extent that this is required by the contextualization of language in the relevant processes. This applies in particular to the treatment of the problem of ethnic inequalities in educational participation in general, in which other processes in addition to language may play an

(additional) role. These include processes of selective migration of immigrant families into certain neighbourhoods preceding any school career, the resulting clearly pre-structured attendance of certain types of preschool facilities and primary schools (with the associated consequences for the further school career of the children in question), possible institutional or other ethnic discrimination in the schools, the influences of the organization of educational facilities and those of the (im)permeability of the educational system, for example in the different German Länder (i.e. federal states), or processes generally well-known from the study of educational inequalities, such as differences in educational aspirations, information deficits and subjective alternatives to an investment in education. All of the available and reliable findings from these fields would indicate that such processes are at most *additional* to the connections dealt with in this report and can form *further* mechanisms leading to the formation of ethnic stratifications, but *cannot* suspend them.

2. Conceptual Bases

Language is a central component of the integration of immigrants into their host societies. Thus, it may be addressed as a special case of the problem of integration in general, also with respect to the significant mechanisms and conditions at work. These general mechanisms and conditions also form the background of educational careers and labour market success which can, in turn, be viewed as aspects and special cases of integration. To this extent, the clarification of the correlations which are important here constitutes a systematizing basis for all three areas involved in this study, i.e. language acquisition, education and the labour market.

Integration

The general problem of integration affects two different, yet interrelated aspects: social integration and system integration (on integration in general, cf. Esser 2000: Chapter 6; with regard to the integration of immigrants, cf. Esser 2004). *Social integration* means the *inclusion* (or exclusion) of *actors* in an existing social system, for example an educational facility or occupational activity in a company, and following on from this the equal or unequal *distribution* of characteristics among *aggregates* or *categories* of actors, for example in relation to income based on ethnic group. As opposed to this, *system integration* concerns the *cohesion* of entire *social systems* and refers to the cohesion beyond different elements of a society, for example, groups of ethnic minorities or functional subsystems.

If – for the purpose of simplification – two possible bases for inclusion/exclusion are assumed for the *social integration* of *individual* actors – ethnic group versus host society – four types of individual social integration arise (on subjective belonging, cf. Berry and Kim 1988: 211 ff. and Berry 1990: 245 f.): *marginality*, whereby there is no inclusion in either the ethnic group or the host society; ethnic *segmentation* which involves inclusion in the ethnic group and exclusion from the host society; *assimilation* which is the (opposite) case of inclusion in the host society with exclusion from the ethnic group; and *multiple inclusion* which involves inclusion in both social systems. Based on this it is possible to identify corresponding categories for the dimension of language, i.e. linguistic marginality or limited bilingualism, monolingual segmentation, monolingual assimilation and competent bilingualism (cf. Figure 2.1).

Figure 2.1: Types of social integration and language proficiency

		Integration into the Host Society	
		Yes	No
Integration into the Ethnic Group	Yes	multiple inclusion/ competent bilingualism	segmentation/ monolingual segmentation
	No	assimilation/ monolingual assimilation	marginality/ limited bilingualism

All four constellations constitute explanatory objects for theories of language acquisition, including, specifically, the acquisition of the language of the receiving country as the acquisition of a *second* language (L2). The explanation of (competent) *bilingualism* beyond the monolingual assimilation of L2 acquisition involves the additional question of the acquisition or maintenance of the *native* language (L1).

As the example of language already shows, the four different types of social integration can relate to different dimensions in terms of content. A distinction is made here between the *cultural* dimension of the acquisition of knowledge and skills, the *structural* dimension of placement in positions, for example in the educational system or on the labour market, the *social dimension* of the initiation of contact and social relations and the *emotional* dimension of identification. Correspondingly, there is also cultural, structural, social and emotional marginality, segmentation, assimilation and multiple inclusion. Language is first of all part of the cultural dimension of social integration. Beyond the cultural dimensions, it is also closely related to the uptake of social contact and emotional identification and all three aspects are mutually dependent. Language is particularly important in its function for the structural integration into the receiving country, i.e. as part of an actor's human capital, and through this in its function for placement in the educational system and on the labour market.

Differences in the *social integration* of individuals based on *aggregates* or *categories*, such as gender or age, give rise to social inequalities. Ethnic inequalities are systematic differences in the *distribution* of characteristics, i.e. such as living habits or professional activities, *between* the different ethnic groups. Ethnic equality exists when there are *no* systematic differences *between* the ethnic groups, for example with regard to average income. In principle, the adjustment in distribution can originate from all parts of the categories involved. If such differences exist, however, there is *ethnic inequality*. *Ethnic diversity* exists if the ethnic differences are limited to *horizontally* evaluated characteristics, such as cultural habits or religious beliefs. In contrast, *ethnic stratification* exists if there are also differences in vertically evaluated characteristics, such as education and professional prestige. In terms of their cultural dimension, linguistic differences only concern the aspect of ethnic or linguistic diversity, however once effects on structural integration arise (above all in the context of education and the labour market), language also assumes characteristics which have serious consequences for the generation of ethnic stratifications.

The *system integration* of societies refers to their unity in a situation characterized by differentiation into different sub-areas or sub-systems. Two forms of differentiation assume particular importance in relation to the problem of system integration and the ethnic pluralization of a society: i.e. *plural differentiation*, which involves the co-existence of basically independent units of differentiated sectors of the population with their own institutional and functional completeness (cf. in general Francis 1976: 349 ff.; Esser 1980: 249 ff.; Hechter 2000: 15 ff.; and specifically on some post-colonial states in Africa: Francis 1976, Chapter 2; Kuper 1969, 1971; Smith 1969), and *functional differentiation*, which involves the interdependence of functional spheres based on the division of labour and not specifically allocated to different regions or sectors of the population. If the plurally differentiated sectors are ethnic groups, a situation involving *ethnic differentiation* exists. As is the case with ethnic inequality, it is possible to identify two different forms of ethnic differentiation: i.e. horizontal ethnic differentiation, involving groups which are (almost) equal in status, such as, for example, the (now more or less abandoned) system of *verzuiling* in the Netherlands, and vertical ethnic differentiation as found, for example, in caste societies, in racist systems such as the former apartheid system of South Africa and in the case of internally and externally demarcated ghettos. The horizontal form of ethnic pluralisation is referred to as ethnic fragmentation and – based on Hoffmann-Nowotny's familiar terminology (1973: 128 ff., 240 ff.) – the vertical form as *ethnic neo-feudalism*.

Plurally differentiated societies and their various “parallel societies” require special integration mechanisms which *externally* coerce the cohesion of the basically centripetal forces, for example through the imposition of a comprehensive value system, e.g. in the form of a political or religious ideology, or state organization with definitive control of cohesion. As opposed to this, functional integration is typical of modern societies. This involves (unconstrained and *internally* regulated) cohesion established through functional interdependencies and exchange of mutually interesting resources and thus, ultimately, through shared interests. It is entirely possible that ethnic differences exist in modern societies and, moreover, in particularly pronounced forms, such as cultural diversity in general, i.e. as an individual “lifestyle” or cultural “milieu”. Insofar as the system integration of societal cohesion in modern functionally differentiated host societies mainly occurs through (market) interdependencies and economic exchange, the social integration of actors through the mutual control of mutually interesting resources and functional system integration are closely related. Thus, the relationships between language, education and the labour market are significant not only for the social integration of the individual immigrants and for the avoidance of ethnic stratification, but also (and through this) for the system integration of the relevant host societies and the dissolution of ethnic fragmentation and neo-feudal “parallel societies”, and the associated potentials for ethnic conflicts.

Mechanisms and conditions

The social integration of immigrants can be understood as the consequence of the interaction of the activities of immigrants, on the one hand, and certain social conditions, on the other, which in turn shape the incentives, opportunities or restrictions and costs associated with the corresponding activities. These social conditions can be assigned to

different contexts and levels. Of particular importance to start with is the level of individual *family and migration biographies*, with their differences based on, for example, migration motives, education and age at migration. Three different societal levels can also be identified here: the conditions in the *country of origin*, the *receiving country* and the *ethnic group*, whereby a distinction can still be made here between ethnic communities and networks in the receiving country and transnational networks. The relevant contexts can in general include supranational units, such as the EU and ultimately also the “global society” and its development, for example in the context of the processes of economic globalization. The focus in the following analyses, however, centres almost exclusively on the influence of the family and migration biography, country of origin, receiving country and ethnic group (on this point, cf. also van Tubergen 2004, Chapter 3).

The activities of the immigrants, which are based on the relevant circumstances, can be identified as the basic mechanism behind the processes of social integration and their structural consequences. The fundamental problem of immigrants consists in the fact that they – ultimately – share the same objectives as locals, e.g. economic prosperity, but generally control fewer or less efficient means of achieving them. This problem is related to the specificity of the particular (human) capital of the immigrants, whose value is associated with the existence of a *specific* context. Because its usability is associated with a specific linguistic environment, language undoubtedly forms part of such a specific capital. This problem can be resolved in different ways, for example, by accepting the loss or by investing in new capitals which are of greater use in the new context.

Based on these requirements, the decision to invest in the acquisition of host country-specific capital is determined by three basic constructs: the *motivation* which is associated with the investment motive, *opportunities* and *costs*. It is assumed that the acquisition of the second language (L2) and the retention or loss of the native language (L1) are in principle based on the same mechanism (on this point, cf. also Chapters 3.1 and 4.1). In addition, other possible alternatives exist for the resolution of this problem: investment *using* ethnic capital, for example through an ethnic company, or investment *in* the upgrading of the ethnic capital, for example through the mobilization of an ethnic movement with corresponding political objectives. It is assumed that second language acquisition is always relevant in terms of these alternatives as well, thus the question of language-related investment arises in all cases.

It is assumed that all *empirical* relations between specific social conditions and social integration or language acquisition proceed through the basic constructs and mechanism of this *theoretical* model and can be explained by it. Thus, for example, education increases the possible return on the investment, enhances the probability for a successful investment and also reduces the costs of language acquisition. The main problems here are the establishment of *substantiated* correlations (“bridge hypotheses”) between the aforementioned contexts and levels of *empirical* social conditions and the basic constructs of the *theoretical* model (on language acquisition in particular, cf. also Chapters 3 and 4), and the fact that these correlations are not always clear or stable across the contexts and over the course of time, as is the case, for example for membership of a specific ethnic group,

which is not determined by certain motivations, opportunities and costs of host-country specific investments.

Language and integration

The special significance of language in the context of integration is related to its multiple functionality and three special functions may be specified here. Language is, *firstly*, a – more or less – valuable *resource*, through which other resources can be obtained and in which one can choose to invest (or not) and thus it is part of the actors' human capital. *Secondly*, it is a *symbol*, which can describe things, express internal states, convey requests and (through this) “define” situations, including the activation of stereotypes about the speaker and the potentially associated prejudices, for example relating to an accent. *Thirdly*, it is a *medium* of communication and the transactions that proceed through it and therefore assumes the special function of the communicative securing of coordination and “understanding”.

Against this general background, the acquisition of the language of the receiving country is first of all a central condition of all further *social* integration of immigrants outside the ethnic context. Educational success, placement on interesting positions, the up-take of contacts and the structuring of identities all clearly depend on language proficiency and affect it, in turn, at least in part (on this point, cf. above). Based on and beyond this, language is also an important component of the mechanisms, through which the *system* integration of (differentiated) societies proceeds. As part of resource endowment and human capital, it provides integrating interdependencies on the different markets and as a symbol that defines situations and activates cultural ideas or values it also provides collective identifications. As a medium, it becomes significant to the extent that it reduces transactional costs and helps to increase the productivity of economic processes which benefits individuals directly and societal prosperity indirectly. In this respect, the investment in a (common) language is also a problem concerning the provision of a *collective* good which is of benefit to all, including those who do not learn the language in question.

Three different explanatory questions may be formulated in relation to the links between language and *social* integration: the explanation of language acquisition in general with the acquisition of a second language, on the one hand, and (competent) bilingualism, on the

General model of social integration

The decision to invest in a new resource can be modelled straightforward using the logic of expected utility theory. Based on this, the expected return or utility (EU) on the two alternatives “acceptance of the status quo” (sq) and “investment” (in) can be determined as follows:

$$(2.1) \quad EU(sq) = U(sq)$$

$$(2.2) \quad EU(in) = p(in)U(in) + (1-p(in))U(sq) - C(in).$$

EU(sq) is the total return U(sq) that may be expected with certainty for the acceptance of the status quo. EU(in) is the return that may be expected from a successful investment. It is composed of the return U(in) to be expected from success weighted with the probability of success of the investment p(in), the certain costs C(in) and the return from the status quo U(in) (which still exists in the event of failure) which occurs with the complementary probability of success 1-p(in). This gives rise to the following condition for the transition from a given status quo to the successful acquisition of a resource:

$$(2.3) \quad U(in) - U(sq) > C(in)/p(in).$$

The *investment motivation* is generated by the difference between the return on success and return on the status quo $U(in) - U(sq)$ and the *investment threshold*, which must be exceeded for an investment effort to be made, is generated by the ratio of the cost of the investment to the probability of success $C(in)/p(in)$.

other, as *explanandum*; based on the aforementioned theoretical model of social integration, this is viewed as a special case of the basic mechanism of social integration. The second and third complexes of questions concern the function of language skills for the structural integration of immigrants into the host societies, in particular through education and the labour market.

A series of manifest theoretical and institutional reasons can be found for the link between *language* and *education* (with language as part of the explanans of educational success): school tuition is firstly instruction through linguistic communication and, even in times of increased transnational migration, is almost always carried out in the relevant national, local or institutional language. In this respect, language acts as a *resource* that clearly influences the efficiency of learning: i.e. it helps or hinders in the learning of the relevant material. In addition to this, in the school context, language can also function as a *symbolic* mechanism for the activation of stereotypes with corresponding effects on actual school performance, for example through phenomena of the “stereotype threat” among the students themselves, or through the expectations and distortion in the grading practices of the teachers. Finally, excessive linguistic diversity, for example in the form of strong ethnolinguistic concentrations in classrooms, may hinder the function of language as a *medium* here, i.e. in the mediation of knowledge, and in this way can increase – *ceteris paribus* – the learning effort involved.

Equally obvious theoretical reasons also exist for the connection between *education and the labour market* and these are also associated with the three functions of language. The productivities associated with the relevant human capital may vary in accordance with the language skills as a necessary *resource* for numerous activities. Immigrants, in particular, are often faced with the problem that the usability of previously acquired human capital, such as education and occupational experience, changes with the shift in the linguistic context. Moreover, language can have symbolic effects on labour markets, for example when stereotypes arise in relation to an accent or uncertainty exists with regard to unfamiliar qualifications or other characteristics (such as illegality) and lead to discrimination, be it discrimination on the basis of the activation of social distance and repulsing prejudices or “statistical” discrimination based on uncertainty regarding “true” characteristics, for example the productivity of an applicant’s human capital. Thus, linguistic diversity can ultimately give rise to adverse effects on the function of language as a communicative *medium* and through this to (considerable) transaction costs in the context of business processes, which then becomes manifest in the lower incomes or non-employment of linguistic minorities.

Against the background of the (structural) socio-integrative functions and consequences of language, it is also possible to summarize and systematize the *system*-integrative aspects on the basis of its three functions. As a part of the productive consequences of cultural diversity in general, the linguistic diversity of a country may be viewed as an important independent resource, for example through the international and transnational relations enabled by it, and as part of the openness and innovation capacity of the relevant society. As a symbol, language is the carrier of collective “definitions” of situations and can generate collective alliances through the activation of identities and loyalties. Similar

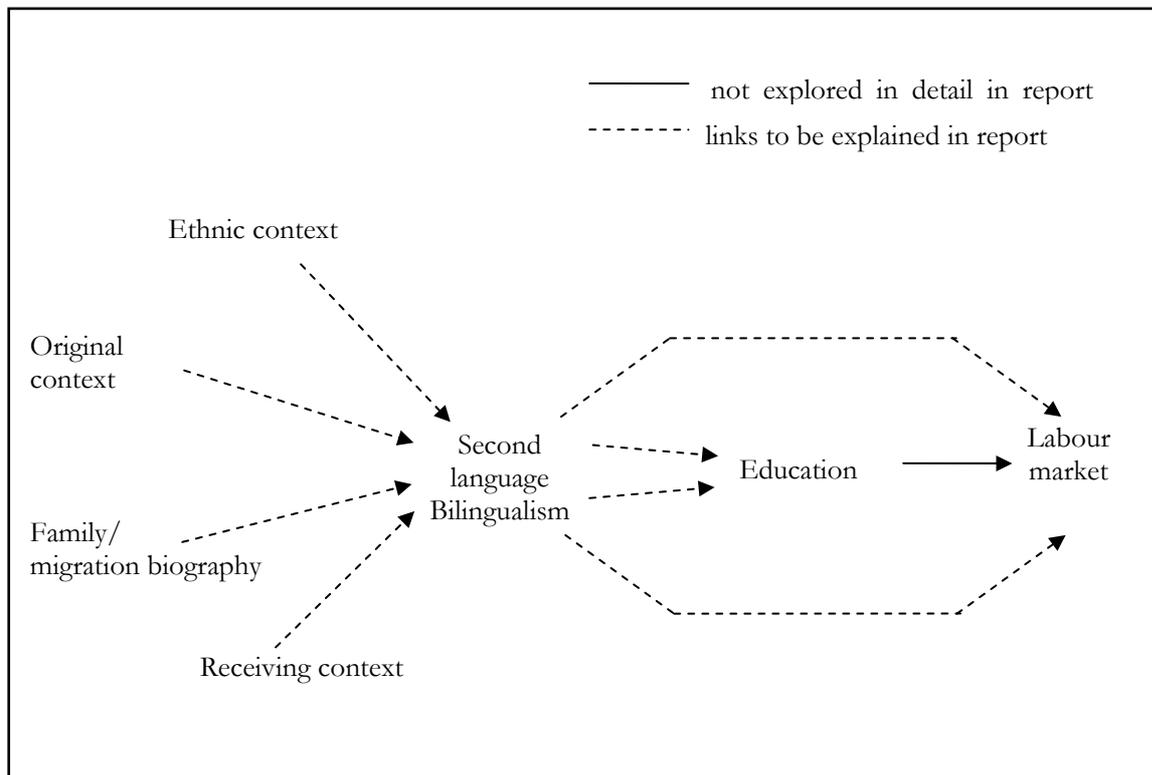
observations are applicable to the function of language as a medium of general societal communication. Here too, as in schools and places of work, linguistic diversity tends to represent a problem: the productive aspects are confronted with the “Tower of Babel problem” of limited comprehension and communicative transaction costs and the need for a general lingua franca arises. The social-integrative and system-integrative functions of language are summarized in Figure 2.2.

Figure 2.2: Structural social integration, system integration and the functions of language

Functions of language	(Structural) Social Integration		System Integration
	Education	Labour Market	
Resource	Learning Efficiency	Productivity	Cultural Diversity
Symbol	Discrimination	Discrimination	Collective Demarcation
Medium	Learning Effort	Transaction costs	“Tower of Babel”

Finally, Figure 2.3 describes the aforementioned links between the determinants of language acquisition and the effects of language on school and labour market success in a simplified form.

Figure 2.3: Migration, language and (structural) integration



The (broken) lines indicate the correlations whose theoretical explanation and empirical tenability is of particular interest to this AKI Research Review 4: i.e. the influences of the four contexts, i.e. family and migration biography, country of origin, receiving country and ethnic group, on language acquisition and the effect of language proficiency on educational and labour market success; each of these correlations is examined separately for second language acquisition or monolingual assimilation, on the one hand, and competent bilingualism, i.e. the additional retention of the native language, on the other. Where possible and necessary, other influences are, of course, also taken into account and reported, if only to avoid incorrect evaluations through the omission of important rival factors and to locate the importance of language in the context of the *entire* process of the (intergenerational) integration of immigrants.

3. Migration and Language Acquisition

The problem of the intergenerational integration of immigrants through language skills ultimately concerns the processes and conditions for the acquisition of competent *second-language* proficiency, irrespective initially of what occurs in relation to the native language, in other words, it concerns the *linguistic assimilation* into the receiving context or certain elements of it.

This view is sometimes countered by the argument that in an era of increasing international migration and transnational relations, bilingualism and multilingualism become more important and are also empirically more widespread than monolingual assimilation. It is true that bilingualism or multilingualism is the standard pattern of language performance, even outside of migration contexts, and is probably more common than mere monolingualism. The (competent) mastery of a second language must in no way relate to all aspects of linguistic skills, or to all conceivable public or private situations. However, this does not alleviate the problem: what matters is that language proficiency meets the formal and informal requirements in the *relevant* everyday areas and functional systems, such as school, training and labour market. Thus, a “functionally differentiated” multilingualism – and not just any kind – is important (Maas and Mehlem 2003: 30 f.), so that partly very specific requirements are set, whose (non) fulfilment can have clear consequences for success in the relevant functional areas. To this is added an often neglected and self-evident fact: analogous to any kind of multiple inclusion in the process of immigrants’ social integration, linguistic assimilation is a *necessary* condition for any *competent* bilingualism or multilingualism.

Thus, the explanation of (assimilative) second language acquisition constitutes the core of all of the relevant processes for the linguistic social integration of immigrants, also because, in logical terms alone, it is always a necessary element of the explanation of (competent) bilingualism and multilingualism (on this point, cf. also Chapter 4.1). This chapter deals with the basic mechanisms and conditions of second language acquisition. It begins with a conceptual-theoretical exploration of the basic aspects and processes of language acquisition (3.1) and, based on this, goes on to systematize the findings of the main empirical studies on the social conditions of (second) language acquisition by immigrants (3.2) and finally examines some special constellations (3.3), including the question as to the general applicability of the findings across different historical, nation-state, cultural and social contexts.

3.1 Basic mechanisms

Although none of the theories of language acquisition are uncontested, it is nevertheless possible to identify a number of obvious convergences between the different theories on certain basic issues (on the general theoretical positions and psycholinguistic principles, in relation to L2 acquisition, in particular, including among immigrants, cf. *inter alia* List 1981;

Verhoeven 1987: Chapters 2 and 3; Spolsky 1989; Weinert 1991; Bleidistel 1992; Ellis 1994; Apeltauer 1997; Fabbro 1999; Klann-Delius 1999; Mehler and Christophe 1995, 2000; Stromswold 2000; Baker 2001; Szagun 2001, 2003; Grimm and Weinert 2002; Pieper 2002; Foley and Thompson 2003; Klein and Dimroth 2003; Reich and Roth 2002, Chapter 2; Maas 2005: 102 ff.; cf. also additional references on the acquisition of bilingual skills in Chapter 4.1). Thus, the acquisition of linguistic proficiency can be viewed firstly as a special form of *learning*. As is the case in all types of learning, four basic parameters come into play in the process of language acquisition: i.e. *motivation*, experienced or expected in the form of association with (primary) reinforcers; *opportunities* for learning, which can be quantified on the basis of the frequency of access to corresponding environmental reinforcements; basic *capability*, which is a prerequisite for certain forms of learning, e.g. in terms of neural capacities, in particular in the form of intelligence, existing “consonant” or “dissonant” associations or a “plasticity” of the neuronal system, which varies in accordance with previous knowledge and aging, but generally declines with age; and the absence of stronger aversive consequences which can be also be viewed the experienced or expected *cost* of learning.

According to the *psycho-linguistic* theories of language acquisition, in the case of the first language (L1), in particular, language learning generally takes place in an undirected way and tends to be the passively experienced and (hence) *unintended by-product* of other activities

► **Motivation, opportunity, ability and costs determine language acquisition**

and corresponding opportunity and reinforcement structures and in the absence of any particular (conscious) motivation. However, it is also possible to *actively* and *intentionally* aim to acquire a language. This

already applies to the acquisition of written language skills in a first language, but is particularly applicable to the case of the acquisition of a second (and all additional) language(s) by adults, and is most obvious in the case of enrolment in language classes which also involve material costs. To this extent, language acquisition can also be viewed as the result of an *active* action and, therefore, as an intentional *investment*.

This is the position adopted in the *economic* theories of language acquisition and usage in particular (on this point, cf. for example, Breton and Mieszkowski 1977; Grin 1990, 1994, 2002; Lazear 1995; Breton 1998; Chiswick 1998; Chiswick and Miller 1992, 1995, 1999; DeVoretz and Werner 2000; Chiswick and Repetto 2001 and Jirjahn and Tsertsvadze 2004). Interestingly, the constructs that play an important role in a more passive form of learning can also be found in the active investment in language acquisition: i.e. *motivation* in the form of investment incentives, e.g. the expectation of additional income based on language proficiency; the access to *opportunities* for the success of the investment, e.g. the existence of certain offers or possible contacts; the *efficiency* of the language acquisition, above all in the form of rates of learning which vary with intelligence or the relevant language didactics; and the *costs* of the investment, e.g. in the form of overcoming social or linguistic distances or the opportunity costs of the time taken up with the learning process.

The *sociological* contributions on language acquisition by immigrants are based on very similar assumptions, in particular the assumption that, like all too forced assimilation in general, second language acquisition by immigrants can generate stress and tension and is, therefore, associated with certain costs (cf., for example, Jasso and Rosenzweig 1990; Portes and Rumbaut 1996; Espenshade and Fu 1997; Dávila and Mora 2000a and b; Bean and Stevens 2003; Stevens 1992; van Tubergen 2004, 2004a).

Even if it often remains hidden behind the different terminology used and focuses adopted in the (empirical) research, the fact is that there is an obvious convergence regarding the basic assumptions relating to the mechanisms and conditions of (second) language acquisition across a variety of disciplines as diverse as linguistics, economics and sociology. Thus, against this background, second language acquisition can be reconstructed as a special case of the model of social integration described in Chapter 1.

As is the case for every other dimension of social integration, there are two alternatives: i.e. staying with a given (L1) status quo as the (rather passive) acceptance of existing circumstances without making any additional investment efforts and successful (L2) language acquisition through learning or active investment activity. The two alternatives shall be denoted as L1 and L2. The general model of social integration explains the investment or successful learning of a (second) language through the evaluation of the status quo, the evaluation of the status that can be achieved through the investment, the opportunities for the corresponding action and the costs involved.

Theoretical and statistical modelling of the explanation of second language acquisition

Based on the terminology of the general model of social integration, $U(L1)$ refers to the evaluation of the basic equipment with language skills in the native language L1 and their estimated productivity, and $U(L2)$ is the productive value of the second language to be acquired, i.e. L2. The term $p(L2)$ refers analogously to the – objective or subjective – opportunities, which enable L2 language acquisition, and the term $C(L2)$ refers to the costs of L2 language acquisition. This gives rise to the following EU weights for the L1 and L2 alternatives:

$$(3.1) \quad EU(L1) = U(L1)$$

$$(3.2) \quad EU(L2) = p(L2) \cdot U(L2) + (1-p(L2)) \cdot U(L1) - C(L2).$$

As compared with the basic model of social integration, in the case of language acquisition, a differentiation is made between the opportunities p . P involves both the *access* (exp) to an L2 input and the *efficiency* (eff): both conditions limit the opportunities for language acquisition and deficits in relation to one *cannot* be compensated by additional scope in relation to the other. This can be taken into account through a multiplicative linking of these probabilities, which together produce the term p for opportunities: $p(L2) = p(\text{exp}) p(\text{eff})$. For the transition from a given L1 status quo to successful L2 language acquisition (through investment or learning), the EU weight of L2 must be greater than that of L1. This gives rise to the following condition for language acquisition (with the aforementioned differentiation of opportunities in terms of access and efficiency):

$$(3.3) \quad U(L2) - U(L1) > C(L2)/p(\text{exp}) \cdot p(\text{eff}).$$

According to the basic model of social integration, the difference between $U(L2) - U(L1)$ can be viewed as the motivation for L2 acquisition and the term $C(L2)/(p(\text{exp}) p(\text{eff}))$ as the learning threshold. The condition for L2 acquisition can also be expressed as follows (with no further differentiation of p in terms of $p(\text{exp})$ and $p(\text{eff})$):

$$(3.4) \quad (U(L2) - U(L1)) \cdot (p(L2) - C(L2)) > 0.$$

If the term for motivation $(U(L2) - U(L1))$ is simplified to $M(L2)$, $M(L2) \cdot (p(L2) - C(L2)) > 0$ results as the condition for language acquisition. A regression model with an interaction effect $M(L2) \cdot p(L2)$ and a main effect for $C(L2)$ can then be derived from this. The two variables contained in the interaction term $M(L2) \cdot (p(L2))$ can be added to the model as main effects and this leads, finally, to a regression equation with three main effects and an interaction effect:

$$(3.5) \quad L2 = c + b1M(L2) + b2p(L2) + b3M(L2) \cdot p(L2) - b4C(L2).$$

This statistical model – including the differentiations based on access and efficiency, which are not further included here, and the resulting interaction effects – is the basic model for the estimation of the effects of the various actual conditions of language acquisition, for example age at migration country, linguistic distance, the use value of the L2 or ethnic concentration.

It should be added that the model (and its statistical implementation) can be applied to the learning of all additional languages, i.e. L3, L4, ..., Ln, in which case the repertoires that have already been acquired represent the status quo, e.g. the bilingual repertoire (L1, L2) in the case of L3 acquisition etc. Similarly, this model can also be used to describe theoretically the abandonment and neglect of any language already acquired, i.e. so-called minority language shift (also referred to as “language loss” and “language death”) as opposed to its conservation, maintenance and further development, i.e. “language retention”. This plays a particularly important role in the emergence of competent bilingualism which, of course, is associated with the continued mastery of the native language (for more detail on this point, cf. Chapter 4).

In order to determine the intensity and significance of the different *empirical* circumstances arising from the four contexts (i.e. family and migration biography, country of origin, receiving country and ethnic group), they must be systematically assigned to the *theoretical* components of the model of language acquisition (motivation, access, efficiency and costs), and thus to the *statistical* basic model, accompanied by corresponding and separate explanations. This attribution of “bridge hypotheses” between empirical conditions and theoretical constructs or statistical models is implemented with reference *inter alia* to similar attempts by authors such as Jasso and Rosenzweig (1990: 320 ff., 327 ff.), Carliner (1995: 3 ff.), Chiswick and Miller (1995: 248 ff.), Chiswick and Repetto (2001: 205 ff.), Dustmann (1997: 245 ff. and 1999: 299 ff.) and van Tubergen (2004a: 81 ff.). Hypotheses on the effects of the different empirical conditions to be expected can then be derived from the relations in the theoretical model.

In terms of *family and migration biography*, the most important empirical conditions for L2 acquisition are the motives for migration and remaining in the receiving country, the duration of stay in the receiving country, age at migration and educational attainment (both in the country of origin and receiving country), the cultural capital the immigrants bring with them, the resulting subjective intrinsic value of language and (individual) intelligence. In terms of the *context of origin*, they are the so-called Q-value of the native language (a measure for the communicative value of the language defined on the basis of the number of speakers of this language throughout the world; cf. de Swaan 2001: 35 ff.; Esser 2006, Chapter 7.1), previous access to the L2 in question in the origin context, e.g. through the relevant national language or media contact, instruction in L2 obtained in the immigrants’ country of origin, the linguistic distance between L1 and L2 quantified on the basis of membership of a similar or different family of languages, and the cultural and spatial distances between the origin and receiving contexts. In terms of the *receiving context*, the significant factors are the Q-value of the relevant L2, the usability of the language on the labour market, the special social and institutional value of the L2, the special institutional promotion of the native language, the collective good value of the L2 as lingua franca in the bridging of linguistically-based transaction costs, inter-ethnic contact and social distances as well as the availability of language courses for L2. Finally, the *ethnic context* can exert influence via the availability of interpreters, L1 media contacts and the maintenance of transnational relations, ethnic concentration or the size of the ethnic group, the proportion of bilingual speakers, the use of L1 in the family, the selection of a partner from

the same ethnic group, control and cohesion in the family and – not least – the children and their contacts.

Like the basic model of the general social integration of immigrants (cf. Chapter 2), in terms of its structure the model of (second) language acquisition outlined above ties in with suppositions from the human capital theory. It could, however, be objected that it concerns a (very) specific theoretical perspective, which may be skewed and/or unsuitable in the context of language acquisition as for other forms of social integration, and that alternative theories need to be preferred. In response to this objection, it may firstly be stated that there is a remarkable convergence between the different approaches in terms of the basic mechanisms and factors they assume and that the model formulates more explicitly and accurately the relations merely verbally described by these approaches and – through the reference to the human capital theory – locates them in a more general and elsewhere well established context. The most important advantage of this also formal specification is that it enables the derivation of – possibly also daring – individual hypotheses, for example on the statistical interaction between motivation and opportunities for language acquisition or education, age at migration and ethnic concentration as correspondingly possible concretizations (on this point, cf. the corresponding empirical findings in Chapters 3.2, 3.3, 5.2 and 6.2). Moreover, the circumstances and processes named by the alternative approaches – such as, for example, (institutional or statistical) discrimination, the effect of institutions and the intrinsic logic of organizations, ethnic resources and ethnic cultural capital – can easily be assigned to the constructs of the model via bridge hypotheses and therefore taken into account *systematically* and in the *context* of the other influences (cf. in particular the overviews of such assignments for second language acquisition in Figure 3.1 and for bilingualism Figure 4.1). None of the alternative approaches has a theoretical form that offers a similar level of specification and capacity for connection with proven theoretical hypotheses, so that any alternative to the model used here would have involved abstaining from any specification. The soundness of the model must of course be demonstrated by the empirical findings and daring hypotheses concerning, for example, the aforementioned statistical interactive effects are particularly well suited to this purpose. The reliability of the theoretical approach and the relevant empirical relations would be specifically confirmed if these relations which are anything but obvious were found empirically.

Figure 3.1 contains an overview of the specified relations between the constructs of the theoretical model (motivation as related to the value of the second language (L2) and the first language (L1), the opportunities as related to the two components of access and efficiency and the costs of second language acquisition) and the various (hypothetical) empirical conditions of (second) language acquisition that feature in the literature.

Figure 3.1: Bridge hypotheses on the relation between the empirical conditions and constructs used in the explanation of second language acquisition

	Motivation		Opportunities		Costs	L2
	U(L2)	U(L1)	Access	Efficiency		
1. Family and migration biography						
Voluntary migration	+					+
Temporary migration	-	+				-
Duration of stay			+			+
Age at migration	-	+		-		-
Education (OC/RC)	+			+	-	+
Cultural capital (RC)	+			+	-	+
Intrinsic cultural value L2	+					+
Intelligence				+	-	+
2. Origin context (OC)						
Q-value of L1		+				-
Access to L2 in OC/media contact			+			+
L2 language instruction in OC			+			+
Linguistic distance L1-L2				-	+	-
Cultural distance OC-RC				-	+	-
Spatial distance OC-RC	+	-	+			+
3. Receiving context (RC)						
Q-value of L2	+					+
Labour market RC	+					+
Social/institutional value of L2	+					+
Institutional promotion of L1 in RC	-	+				-
Collective good value of L2	(+)					(+)
Inter-ethnic contacts	+		+			+
Social distance RC-OC	-		-		+	-
Language courses in L2			+	+/-	+	?
4. Ethnic context						
Interpreters	-					-
L1 media contact		+	-			-
Transnational relations	+	+	+/-			?
Ethnic concentration/group size		+	-			-
Proportion of bilinguals in the region	-	+	-			-
Family language L1		+	-			-
Partner/spouse from same ethnic group		+	-			-
Family cohesion		+				-
Children	-	+/-	+/-			?

Note: U = expected benefit; OC = origin context; RC = receiving context; L1 = first language; L2 = second language

The various theoretical constructs (motivation for L2, motivation for L1, access, efficiency, costs) and the hypotheses concerning the resulting overall effect of the relevant empirical condition on second language acquisition (L2) that can be derived from the theoretical correlations are presented in the columns in Figure 3.1. The different empirical conditions – classified in accordance with the four aforementioned contextual levels (i.e. family and migration biography, origin context, receiving context and ethnic context) – are presented in the rows. Plus signs indicate a positive relation in terms of the verbal description (e.g. “voluntary migration” is associated with higher L2 motivation), minus signs signify a negative one. Opposing (bridge) hypotheses exist in a few cases, for example in the case of children, thus the hypothesis concerning second language acquisition must remain open; such cases are indicated in the table by a question mark. The correlation presented in brackets (between the collective good value of the second language and motivation and L2 acquisition) indicates that while a motive exists, in general it is not productive, as this is precisely the problem with collective goods (on this point, cf. also Chapter 3.2). The symbolism is correspondingly applicable to Figure 4.1 in Chapter 4.

Thus, it is not always possible to assign the different empirical conditions to a single construct and it is not always possible to formulate clear hypotheses in relation to the classification and correlations in the theoretical model. This is also due to the fact that the empirical circumstances generally only provide rough (proxy) measurements of the relevant theoretical constructs or are anyway multi-dimensional. This alone partly explains the controversial nature of the debate and ambiguous findings and these complications only become identifiable through the explicit explanation of the correlations using such bridge hypotheses. In most cases, however, it is possible to state unequivocally what can be expected for second language acquisition. This theoretical expectation is indicated in the final column L2. The following account of the empirical findings largely follows the order and systematics used in this summary.

3.2 Empirical correlations

Compared with the abundance of studies on the social integration of immigrants in general, the number of *systematic* and usable studies on the empirical conditions for linguistic integration, i.e. methodologically adequate studies that work with multivariate processes, is also considerable but manageable.

The following report on the main empirical findings on the social conditions of L2 language acquisition among immigrants is mainly based on the studies carried out by Alba 2004; Alba, Logan, Lutz and Stults 2002; Bean and Stevens 2003; Beenstock 1996; Beenstock, Chiswick and Repetto 2001; Bleakley and Chin 2002, 2004a, 2004b; Carliner 1995; Chiswick 1991, 1998; Chiswick and Miller 1992, 1994, 1995, 1996, 1999; Chiswick and Repetto 2001; Chiswick and Wenz 2004; Chiswick, Lee and Miller 2002a, 2002b; Dávila and Mora 2000a and b, 2001; Demel, Kohlbacher and Reeger 2003; Dustmann 1994, 1997, 1999; Dustmann and Fabbri 2003; Espenshade and Fu 1997; Espinosa and Massey 1997; Esser 1981, 1982, 1986, 1989, 1990a, 1990b; Gazioğlu 1996; Grenier 1984; Hayfron 2001; Jasso and Rosenzweig 1990; Lazear 1995; Lindstrom and Massey 1994;

Lopez 1996, 1999; McManus, Gould and Welch 1983; Nauck 2001; Portes and Hao 1998; Portes and Rumbaut 1996a, 2001a; Portes and Schaufliker 1996; Rumbaut 2004; Shields and Wheatley Price 2001, 2002; Stevens 1985, 1992, 1994; Stevens and Schoen 1988; Stevens and Garrett 1994; Stevens and Swicegood 1987; Stolzenberg and Tienda 1997; van Tubergen 2004a and Zhou and Bankston 1998. Chapter 4 contains references to other studies on L2 acquisition in the context of bilingualism which always incorporates L2 acquisition as well.

The presentation of the correlations is based as far as possible on the above-described levels for the theoretically-assumed influencing factors: i.e. *family and migration biography*, *origin context*, *receiving context* and *ethnic context*, which in turn are structured where possible in the order of the theoretical constructs of motivation, access, efficiency and costs. These findings are taken up in part again in Chapter 3.3 and discussed in the context of some special constellations and re-ordered, for example where the acquisition of the different *language forms*, such as understanding, speaking, reading and writing, and differences in language acquisition based on *gender*, *generation*, *nationality* or the special *interaction effects* of the basic factors, in particular with ethnic concentration, are addressed. If not stated to the contrary, the reported effects are statistically controlled for the relevant background variables. This means that as far as possible the correlations demonstrated are not apparent co-variations, but (directly effective) *causal* relations.

Family and migration biography

The family and migration biography describes the specific features of the social situation of individual immigrants (and their families) in their country of origin, the circumstances surrounding their migration and of their situation in their new environment. According to the theoretical model, negative effects on L2 acquisition are only expected in the case of planned temporary migration and an advanced age at migration. As opposed to this, L2 acquisition is presumed to be promoted by voluntary migration, an extended duration of stay, a higher level of educational attainment, greater cultural capital, a high intrinsic cultural value of the language and a high level of intelligence. The available empirical studies on the effects of family and migration biography on language acquisition provide reliable and, moreover, detailed empirical evidence in support of almost all of these hypotheses.

There are very few studies available on the (negative) effects of *involuntary* or *temporarily* planned migration on L2 language acquisition because the migration motives are mostly not recorded. However, the few studies available on this topic clearly confirm the theoretical assumptions (Dustmann 1999: 308 ff.). Some indirect indicators can also be found: for example, weak links with the host country delay language acquisition (Espenshade and Fu 1997: 296, Table 2). In the case of predominantly family-based migration motives and in the case of refugees, in particular, L2 skills are poorer than those found among voluntary immigrants with primarily economic motivations, although the differences tend to diminish over the course of time (Chiswick, Lee and Miller 2002b: 15 ff.).

Almost all of the studies that recorded the *duration of stay* report clear and significant effects on L2 acquisition (cf., for example, Jasso and Rosenzweig 1990: 320 f.; Stevens 1994: 176 ff., Tables 6.5 and 6.6; Portes and Schauffler 1996: 15 ff., Table 2.1; Gazioğlu 1996: 105 ff., Tables 7 and 8; Chiswick and Repetto 2001: 211; Portes and Rumbaut 2001b: 124 f., Figure 6.3, and 137, Table 6.5; Dustmann and Fabbri 2003: 705, Table 4; Demel, Kohlbacher and Reeger 2003: 71 ff.). In his broadly based international comparative study, van Tubergen (2004a: 103 f., Tables 4.8 and 4.9, in both cases Model 2) also observes an effect of the duration of stay and, moreover, across very different origin, host and ethnic contexts. However, the intensity of the effect of the duration of stay diminishes with the increase in the duration of stay. This also explains why hardly any effects of duration of stay are observed in panel studies with the increasing duration of stay of the participants if a distinction is made on the basis of generations (cf. Haug 2005: 276; cf. also Hayfron 2001: 1975, Table 2). The correlation remains when the intention to return and actual return to the country of origin are controlled for (Lindstrom and Massey 1994). This can be observed as one of the clearest and most consistently confirmed findings concerning the conditions of L2 language acquisition (cf. Bean and Stevens 2003: 159).

► Extended duration of stay, low age at migration and good education have a positive effect on second language acquisition

The correlation between *age at migration* and L2 acquisition also counts as one of the most substantiated and stable findings among the various other conditions (cf. in particular Johnson and Newport 1989: 79, Figure 1; Jasso and Rosenzweig 1990: 320 f.; Dustmann and Fabbri 2003: 705, Table 4 and Rumbaut 2004: 1193, Table 7). The studies that examine this issue observe a major decline in learning efficiency from around the age of 10 (cf., for example, Bleakley and Chin 2002: 36, Figure 1; Bleakley and Chin 2004a: 36, Figure 1). While various theoretical aspects of this correlation are disputed, such as the rationale and empirical support of the so-called critical-period hypothesis according to which learning is limited by age-associated neurological factors (for more detail on this point, cf. Chapter 4.3), and while there can be no doubt that adults are also capable of competent L2 acquisition, based on the evidence presented in the systematic studies on this topic, it is equally indisputable that age at migration has a negative effect on the likelihood of successful L2 acquisition – irrespective of other influences and compensatory measures. There are also indications that the age at migration of *parents* also has an indirect negative effect on the L2 acquisition of children. It is very likely that younger children, in particular, will inherit the L2 deficits of parents who migrate at an advanced age (Bleakley and Chin 2004a: 38 ff., Figure 3 and Table 3). Because the foundations of a successful educational career are already laid in the early years of life, these effects of the age at migration of the parents have far reaching consequences for the subsequent educational attainment of the children (for more detail on this point, cf. below).

The evidence in support of the fact that *education* promotes (L2) language acquisition among immigrants is also overwhelming: almost all of the (systematic) studies on second language acquisition among immigrants report a strong and significant influence in this regard (cf. *inter alia* McManus, Gould and Welch 1983: 199 ff., Tables 10 and 11; Esser 1989: 433 f.; Portes and Schauffler 1996: 15 ff., Table 2.1; Dustmann 1997: 254 f., Tables 3

and 4; Espenshade and Fu 1997: 296, Table 2; Demel, Kohlbacher and Reeger 2003: 67, Table 5; Portes and Rumbaut 1996a: 222 f., 2001b: 136, Table 6.5; Dávila and Mora 2000a: 375, Table 2; Shields and Wheatley Price 2002: 146, Table 2; Bean and Stevens 2003: 162, Table 7.5; Dustmann and Fabbri 2003: 705, Table 4). At a rough estimate, according to the studies carried out by Chiswick and Miller (1995: 274 f.), language skills improve by two percent for every year of education completed (calculated on the basis of “no education”) – with statistical control of other important parameters, such as intention to return to the country of origin, duration of stay and age at migration, and taking into account the possible interaction between education and language acquisition and also across very different origin and receiving contexts and types of immigrants (on the individual effect of education with control of the effects of motives for remaining in the immigration country, duration of stay and age at migration on language acquisition, for both first and second generation immigrants, cf. also Esser 1981: 91 ff., 1982: 286 ff., 1986: 42 ff., 1989: 433 ff.).

In terms of the direct effect of education on language acquisition, a distinction should be made between three different references: i.e. education already obtained in the *origin* context, education obtained in the *receiving* context following migration and the educational attainment of the *parents*. While the positive effects are produced by all three factors, the influence of origin-specific education is usually (significantly) weaker than that of qualifications obtained in the receiving context (cf. in particular Espenshade and Fu 1997: 296, Table 2, who also find that the stronger effects of education in the receiving country decline with duration of stay; for a similar result, cf. McManus, Gould and Welch 1983: 120, Table 11). The effect of education appears to be particularly significant in the presence of otherwise unfavourable conditions. This is also due to a more technical fact: the higher the level of the language proficiency the immigrant brings with him or her or obtains in any other way, the more likely the emergence of a “ceiling” effect with regard to further language acquisition, as significant improvement is always more difficult to achieve starting from an already high level of proficiency. This kind of interaction between the effect of education with duration of stay has been demonstrated, for example, by Chiswick and Miller (1992, 1995: 255 f., column 3).

The effect of *illiteracy* constitutes a special aspect of the significance of existing cognitive and cultural capital in relation to language acquisition. The absence of reading and, in particular, writing skills in the native language – again controlling for the relevant third variables – has an *independent* (negative) influence on language acquisition. Dustmann (1994: 142 ff., 1999: 309 ff.; cf. also Hayfron 2001: 1975 ff.) reports a clear influence of *writing* skills in the *native* language on L2 acquisition, which explains part of the effect of education and so constitutes evidence of the fact that education is actually an indicator of cognitive and cultural capital in general. This effect is (considerably) stronger for the acquisition of *writing* skills in the L2 (for more detail on the “transfer” of L1 skills to L2 acquisition, cf. Chapter 4.3).

Origin context

The origin context is the most important structural background factor behind the specific features of individual family and migration biographies and their associated consequences. A series of direct links also exists between the origin context and second language acquisition (cf. the overview in Figure 3.1). In terms of *motivation*, the Q-value of the L1, i.e. the native language, and the geographical distance between the origin and receiving contexts are of particular importance; in the context of *access* to the second language, both previous contact to the L2 in the country of origin, including media contact and language instruction in L2, and, in view of transnational mobility, geographical distance, which hampers L1 access, play an important role. The linguistic distance between L1 and L2 and the cultural distance between the contexts affect the *efficiency* of language learning and also the *costs* of L2 acquisition. While the empirical evidence available on the specific effects of the origin context on L2 acquisition is not particularly extensive, the empirical foundation is comparatively solid, at least in relation to some of the central aspects. This applies in particular to the influence of the Q-value of L1 (in relation to the relevant L2), to the spatial distance between the origin and receiving contexts, to previous access to the L2 in the country of origin and, especially, to the linguistic distance between L1 and L2.

Very few studies are available on the weakening of motivation for L2 language acquisition by the Q-value of L1, however some significant evidence is available: for example, the (aforementioned) study by Chiswick (1998: 262, Table 4) on the acquisition of Hebrew by immigrants in Israel. The most important finding is that knowledge of English as the language with the highest Q-value throughout the world undermines the acquisition of all other L2s. Beenstock, Chiswick and Repetto (2001: 51, Table 3) even find that the linguistic deficits in Hebrew of immigrants from Anglophone countries of origin tend to have *increased* over the course of time. Based on the example of language, this confirms a correlation which is important for the overall integration of immigrants: i.e. the tendency to (linguistic) assimilation to the relevant receiving context *diminishes* with control over usually productive and simultaneously *generally* usable capital and increases with the weakening of the value of the ethnic capital.

The findings on the effects of *spatial distance* are not uniform. On the one hand, L2 language skills appear to increase with distance from the origin context (according to Alba 1999: 8, Table 1), on the other hand, however, Jasso and Rosenzweig (1990: 321 f.) observe a clearly *negative* correlation between the spatial distance of the country of origin from the USA and language proficiency while Espenshade and Fu (1997: 297, Table 2) find *no* direct effects of spatial distance on L2 competence. In his internationally comparative study on *inter alia* spatial distances recorded throughout the world and, again, having controlled for other possible influences, van Tubergen (2004a: 101 f., Tables 4.8 and 4.9, 107), also finds a *negative* correlation between spatial distance and L2 acquisition. This could be explained by the generally greater linguistic distances and, hence, possibly related additional and, above all, cultural and social distances (cf. below). Espenshade and Fu (1997: 297) also observe varying effects when distance is disaggregated into short (up to 2000 miles), middle (2000 to 4000 miles) and long (4000 miles and more): competence increases slightly up to medium

distance and then strongly declines with further increase in distance (on this point, cf. Chapter 3.3. in the context of the effects of nationality).

The effect of *access to L2 in the country of origin* is theoretically obvious and almost trivial, and is clearly confirmed empirically whenever it is tested (cf., for example, Jasso and Rosenzweig 1990: 321 f.; Chiswick 1991: 158, Table 3; Espenshade and Fu 1997: 296, Table 2; Chiswick and Miller 2002; Bean and Stevens 2003: 156, Table 7.4; van Tubergen 2004a: 101 f., Tables 4.8 and 4.9, 106). In the extreme case of international migration, there is no difference between the languages in the origin and receiving contexts. This is particularly significant in the case of migration to Anglophone countries. In general, previous contact with English as L2 appears to have increased across the cohorts through its diffusion in the global media and as the global lingua franca (cf. Carliner 1995: 25). The level of modernization and integration of the country of origin into the process of

► Linguistic integration is impeded by linguistic distance between the languages of the country of origin and the receiving country

(economic) globalization can also dictate this previous access to the L2, in particular English (cf. van Tubergen 2004a: 105 f.). Thus, part of the effect of education (of both parents and children) and national origin on L2 language acquisition can perhaps be explained by the already existing level of L2 proficiency (Chiswick 1991: 157). Similar consequences may be expected for other kinds of previous access to L2 in the country of origin, such as language instruction, language courses and media contact. Unfortunately, there is no systematic study available which addresses this question. Indirect evidence can, however, be deduced from the findings for linguistic distance between L1 and L2 (see below): any access to L2 in the country of origin gives rise to a reduction in the costs associated with L2 language acquisition.

The significance of linguistic distance between an L1 and an L2 for L2 language acquisition has been demonstrated in particular by the research carried out by Chiswick (Chiswick 1998: 262; Chiswick and Miller 1992: 238; Chiswick and Repetto 2001: 212 f.; Beenstock, Chiswick and Repetto 2001: 40, 44, 51, Table 3; Chiswick, Lee and Miller 2002c). Origin-related effects which can be interpreted as the consequence of linguistic distance represent one of the most stable findings – even across entirely different contexts and families of languages (for an explanation of differences based on the nationality of immigrants, cf. Chapter 3.3). Other aspects of various learning efficiencies, for example cultural and social distances, are probably concealed behind this phenomenon (cf. Dustmann 1997: 257 f. on the differences in L2 acquisition among former Yugoslavs and Turks in Germany, in particular). However, one study exists that does not observe such effects in the same way as Chiswick and others, i.e. that by Carliner (1995). Carliner suspects instead that immigrants differ systematically on the basis of the geographical distances they travel. However, in an international worldwide comparison of different immigrant groups and immigration countries, in which all of the available background factors were taken into account, van Tubergen (2004a: 101 f., Tables 4.8 and 4.9, 106) observes the expected effect.

For the simple reason that it would require the *simultaneous* systematic comparison of several receiving countries with several immigrant groups, very few systematic empirical studies have been carried out on the specific effect of the *cultural* (and social) distances

between the populations of the receiving countries and immigrants from certain origin contexts. The relevant analyses only became available with the publication of van Tubergen's recent study (van Tubergen 2004, 2004a). Based on the assumption that immigrants with non-Christian beliefs encounter the greatest cultural and social distances in generally Christian immigration countries, the indicator for cultural difference is the differentiation based on *religion*. After controlling for the relevant background variables, however such an effect is *not* observed; on the contrary, it emerges that immigrants from non-Christian countries have *better* L2 skills (van Tubergen 2004a: 101 f.; Tables 4.8 and 4.9, 105). This is possibly also a consequence of the fact that the different non-Christian religions differ very strongly in terms of (linguistic) assimilation tendencies, for example in the case of Islam as compared with the Asian religions. This is not further examined in van Tubergen's study and this may be due to the fact that the study also controls for linguistic distances and – in particular – the influence of negative stereotypes in the receiving countries, thus the part of the religious effect which arises from linguistic and social distances may have been taken into account in that context (for more information on the effect of social distances, see below). Hence, the effect observed by van Tubergen *only* incorporates the *cultural* aspects of religions.

Due to the very rough operationalization and multi-dimensionality of the differentiation between Christian and non-Christian, these findings should, however, be viewed with extreme caution, and little is basically known about the correlations and mechanisms that lead from certain religious beliefs to differences in language acquisition.

Receiving context

According to the theoretical (bridge) hypotheses concerning the effect of the receiving context, the *motivation* for L2 acquisition is firstly determined by the Q-value of the relevant L2 (in relation to the L1 value) and, in particular, through the benefits accruing on the host-country labour market on the basis of L2 competence. To this is added the other institutional and social productivity of L2, including the possible reduction of motivation through an institutional promotion of the L1 in the context of a multi-lingual language policy in the receiving country. As opposed to this, it is unlikely that the latent collective good value of L2 acquisition would have any empirical effects: while the spread of the language is in everyone's interest, everyone would also benefit if someone else made the effort to learn it. Inter-ethnic contacts in the receiving country and social distances there also affect the motivation for learning the language of the country in question. However, the receiving context is particularly significant in terms of *access* to opportunities for learning the language; such opportunities are created through interethnic contacts and the availability of language courses, in particular, whereas, like social distances, ethnic concentration and integration in inner-ethnic networks can restrict access. As already discussed in relation to the origin context, in addition to the didactic opportunities for increasing the efficiency provided by language courses, the *relational* links between L1 and L2 and between the original and receiving context, i.e. linguistic and cultural distance, play an important role in the *efficiency* of language learning. In terms of *costs*, social distance comes into play again as do the direct and indirect costs of the language courses.

Disregarding the above-described influences of the relations between the origin and receiving contexts, such as those arising from the differences between the Q-values of L1 and L2 and from any potential linguistic and cultural distance, in terms of the influences of ethnic concentration (see below in the context of the ethnic context) and the effect of the available language courses, apart from one exception, there are few reliable empirical findings on special effects of the receiving context on L2 acquisition. The studies which analyze the importance of language in terms of positioning on the *labour markets* (this topic is dealt with in detail in Chapter 6), on which also a large proportion of the findings *on* language acquisition reported here are based, do not contain any specific information on the special motivational significance of different labour market opportunities in the receiving country *for* language acquisition. For example, there are no studies which show that language acquisition increases with good labour market opportunities, e.g. as a function of economic cycles or specific sectors, or that the access that may exist in conjunction with workplace integration affects language acquisition. However, a single reference exists in Bean and Stevens (2003: 162) which suggests that (in addition to the other influences) labour market integration promotes language proficiency (on this point, cf. also Chapter 6.2).

The existence of an effect arising from the specific *institutional promotion of L1* in the receiving country, for example through the general (migration) policy orientation of the receiving country, can only be deduced indirectly. There are very few references to this and those that exist tend to be very rough or indirect. In van Tubergen's (2004) study, the "political climate" of differences in the institutional promotion of L1, for example based on an assimilationist rather than predominantly multilingual policy approach, is operationalized by the left-right orientation of the ruling political parties, however the special case of Canada was not included in this analysis for technical reasons (van Tubergen 2004a: 86). The effect emerges as consistent and, following all multivariate controls, shows that L2 proficiency is (significantly) *lower* under *left-wing* governments than it is under *right-wing* governments (van Tubergen 2004a: 102 ff.). Based on the model of L2 acquisition, the obvious interpretation of this is that the value of and access to L1 are enhanced with the support of the non-investitive status quo option of the retention of L1, which then has a negative effect on L2 acquisition due to the associated reduction of the investment motive. However, in van Tubergen's study, this effect disappears when the USA, which is classified as ruled by the right, is excluded. It should be added that there is a clear bivariate correlation between the right-wing orientation of a (receiving) country and the degree of social distance from immigrants (with $r = 0.57$) and that the social distance in turn hinders L2 acquisition (for more detail on this, see below).

As opposed to this, the effects of interethnic contacts on language acquisition are well documented – also with multivariate controls (cf., for example, Esser 1981: 78 f., 1982: 285 f.) and consideration of the problem of the endogeneity of language acquisition and interethnic contacts (cf., in particular, also Esser 1981: 82 ff, 1982: 284 f., 1986: 42 ff., 1989: 433 ff., 1990c: 199 ff.). It may at least be assumed that the effect of language proficiency on contacts is greater than that of contacts on language proficiency (cf. also Chapter 6 on the

effect of language and inter-ethnic contacts on labour-market placement, and Kalter 2005a: 22 f., Table 5, in particular).

As van Tubergen's comparative international study shows (2004a: 104 f.) and as may be also expected from the theoretical model and from the mechanism of increased costs and reduced motivation for linguistic investments, ethnic prejudice, a xenophobic climate and *social distances* in general have a *negative* effect on L2 acquisition. A possible interrelation should, however be noted here whereby the xenophobia could (also) be related to the proportion of immigrants who are not linguistically integrated into the host society; at any rate, van Tubergen does not wish to exclude this possibility (van Tubergen 2004a: 105). In this context, the aforementioned correlations between xenophobia in a (receiving) country, political orientation and L2 language acquisition become significant, whereby a right-wing orientation is accompanied by a low level of tolerance but at the same time promotes rather than hinders L2 acquisition. Thus, according to van Tubergen's findings, the institutional and social climate that immigrants encounter have *opposite* effects and are based on different mechanisms: a multilingual *policy* (with corresponding measures for L1 promotion) tends to *hinder* L2 acquisition, while a multi-cultural public climate of tolerance and openness tend to *promote* it. Due to the opposite effects of right-wing orientation and tolerance, the effects largely cancel each other out empirically. Thus, based on the identifiable causal correlations, the optimum combination would be a tolerant public and assimilationist policy. Such a combination is, however, unlikely if it is to be assumed that the (migration) policy of a country and public values relate to each other, at least to some extent.

► Contact and limited social distances between immigrants and natives have a positive effect on second language acquisition

There are practically no reliable empirical studies available on the efficacy of language courses for (adult) immigrants (see below). Because they record and statistically control for participation in language courses and the most important of the other conditions influencing language acquisition, the studies carried out by Beenstock (1996), Gonzalez (2000) and Beenstock, Chiswick and Repetto (2001) constitute an exception to this rule. While the effects they identified were entirely positive, they were also weak. Hayfron's (2001) findings on the conditions and effects of language acquisition among immigrants in Norway are particularly interesting. Ninety percent of the immigrants studied, who mainly originated from underdeveloped countries, had participated in language courses and of these 79.5 per cent had completed the programmes. In two cases, and in accordance with the findings of the above-mentioned studies carried out by Beenstock (1996), Beenstock, Chiswick and Repetto (2001) and Gonzalez (2000), language courses were identified as having a significant influence on language acquisition in the expected way, i.e. in relation to speaking and reading. However, this was only the case among participants who had *dropped out* of courses. Moreover, among those who completed courses, some (insignificant) *negative* influences were observed. A probably plausible interpretation of this finding would be that the language courses either prevented immigrants from gaining more effective access to L2 acquisition or that those who dropped out of courses already had better L2 skills, are better

language learners or managed to find work faster due to other (unrecorded) advantages which prevented them from completing the courses.

As opposed to this, there is almost no sound empirical evidence available on the efficacy of *state-ordained* language and integration courses, for example in the Netherlands and Sweden, which have acted as a model for the reorientation of migration and integration policy in a number of countries, including Germany (cf. Unabhängige Kommission “Zuwanderung” 2001: 258 ff.; Sachverständigenrat für Zuwanderung und Integration 2004: 334 ff.).

► **Little information available on the efficacy of language courses**

Evaluations have meanwhile been carried out on these courses, (cf. Schönwälder, Söhn and Michalowski 2005). However, these evaluations mainly report on the practical circumstances and problems associated with the establishment and implementation of the courses and on the implementation of the associated political objectives. They indicate that there are rather serious problems in terms of ensuring comprehensive participation up to course completion and suggest that these problems are particularly prevalent among immigrant groups, which face the most acute problems in relation to integration, and in the context of difficult social situations, for example in larger cities. However, there is almost no reliable information in these reports regarding the success of these measures and, in particular, concerning the actual improvements achieved in L2 proficiency and subsequent labour market integration – specifically, improvements that can be causally linked with the courses. As is not uncommon in similar reports on the implementation of promotional state measures, for example in the context of studies on the effectiveness of bilingual education (on this topic, cf. Chapter 5.2), the methodological conditions that would make it possible to establish a reliable causal correlation here are almost entirely lacking (on this point, cf. also the general comments on the selection of the studies on language acquisition in Chapter 1). Thus, it is not possible to interpret even sporadic evidence, for example, that interest in the courses is significant and that the course targets were not achieved among some sectors of participants. At best, there is some evidence that – if at all – participants with a higher level of education and better qualifications benefit in particular from the courses. However, given the virtual non-existence of methodically correct evaluations on this topic, even observations of this nature are impossible to assess.

Ethnic context

In terms of *motivation*, from the perspective of the ethnic context, the availability of interpreters, children (in their function as interpreters) and the proportion of bilingual speakers play a role in undermining the significance of the second language while the existence of transnational relationships tends to upgrade the second language; however these influences should be viewed as either insignificant or contrary. The ethnic context has significant effects on motivation through the upgrading of L1 skills: the availability of L1 media contact (for example, through the press or satellite television), transnational relationships, ethnic concentrations and larger linguistic groups or proportions of bilinguals in the environment, L1 language usage in the family, a partner or spouse from the same ethnic group, strong family cohesion and children also reinforce the usability of the native

language. The situation with regard to *access* is very similar. Almost all of the aforementioned factors in terms of the availability of an ethnic context also mean everyday access to the native language. As a result, through the combination of the upgrading of the L1 and the weakening of the motivation for L2 acquisition arising from this, even in the case of relatively high evaluations of L2, due to the everyday and almost cost-free access to L1, a clear tendency arises for linguistic assimilation into the non-ethnic receiving context *not* to take place. This is probably particularly applicable to high ethnic concentrations and at the same time institutionally well developed ethnic communities because in this instance several of the conditions come together and even reinforce each other (such as the interaction between lower L2 motivation and stronger L1 access; on the theoretical explanation of this interaction effect, cf. Chapter 3.1 above, on the empirical correlations, cf. Chapter 3.3 below).

There are few reliable empirical studies available on the individual effects of *interpreters* and *L1 media use* in the host country, i.e. through satellite television or the print media, on L2 acquisition, and none at all that would enable the control of the relevant background variables. The use of ethnic media displays a clearly *negative* bivariate correlation with L2 acquisition (Weiß and Trebbe 2001: 129, Table 61). This is corroborated by the – few – multivariate analyses of this correlation, carried out, for example, by Chiswick and Miller (1996, 2002) who observe – rather incidentally in the context of the effects of the ethnical concentration – that the availability of an ethnic press (in Australia) or regular listening to Spanish radio stations (in the case of Mexican immigrants in the USA) have a clearly negative effect on L2 language acquisition *over and above* all other factors (Chiswick and Miller 1996: 24, Table 1, 2002: 19 and 36, Table 1). Correspondingly, L1 media contact appears to particularly affect the *retention* of the native language, and therefore encourages monolingual segmentation (cf. Chapter 4.2 for a discussion of the problem of language shift and bilingualism).

No corresponding studies have been carried out on the effect of *transnational* relations on language acquisition. However, some indirect conclusions can be drawn from the different types of transnational relations (on this point cf. Itzigsohn and Giorguli Saucedo 2002: 771 ff.). If the transnational relations represent an equivalent for the existence of ethnic communities, the findings for the latter can be adopted for this kind of transnationality: a reduced propensity for L2 acquisition (for more information on the effect of ethnic concentrations and communities, see below). The only direct reference on this topic can be found in Shields and Wheatley Price (2002: 146, Table 2) who observe that in the case of transfer payments being made to the country of origin (and after controlling for relevant third variables) it emerges that L2 proficiency is weaker (on the effect of motives for remaining in the receiving country, see above). A significant proportion of transnational relations are maintained by ethnic entrepreneurs. The latter are – for the most part – better educated, have specific business experience and have a comparatively high level of generalizable capital, including knowledge of the language of the “host” society or of English (cf. Portes, Haller and Guarnizo 2002: 290 ff. and Itzigsohn and Giorguli Saucedo 2002: 785 ff.). Although no direct evidence has emerged hitherto to the fact that transnational entrepreneurs have better L2 skills, based on their bridging function and supra-

national economic activities, this may be well assumed. In addition, they probably also have higher levels of L1 competence as this constitutes one of the differential advantages they offer, is in demand and is exploited by them for commercial gain: as was always the case with the “middleman minorities” in the past, in general bilingualism is a central element of the special working capital of transnational entrepreneurs (on this point, cf. Chapter 4). Transnational relations are also maintained as a result of a certain degree of marginalization and in the case of weak motives for remaining in the receiving country. Thus the findings on the effects of the motive for remaining in the receiving country on language acquisition and on the characteristics of those who return to their country of origin are transferable. A low level of L2 acquisition is frequently accompanied by weak motives for remaining in the receiving country (cf. Dustmann 1994 and Steiner and Velling 1994; see also above). In most if not all cases, the reason for returning to the country of origin appears to be the failure to integrate into the receiving context. The tendency to return to the country of origin declines with increasing duration of stay, higher educational attainment, increasing integration into the labour market, interethnic marriage, the follow-on migration of family members to the receiving country and proficiency in the language of the receiving country (cf. Velling 1994, Constant and Massey 2003, Constant and Zimmermann 2003 on repeat immigrants). The problem of endogeneity, in this case between language, intention to stay and tendency to (re-) return to the country of origin, should, of course, also be noted here; if the intention to stay is weak from the outset of the sojourn in the receiving country, L2 acquisition suffers and hence also further integration and this then leads to a strengthening of the inclination to return and possibly also to actual (and sometimes, again, temporary) return to the country of origin. The studies examined ignore this problem almost entirely, however as in the case of interethnic contacts and language acquisition, it may be assumed that for technical reasons alone, regular absence from the receiving context (must) result in the reduction of access and hence also of language acquisition.

When it comes to the identification of the effects of *ethnic concentrations* on language acquisition, it should be noted that differences in the characteristics of residents in ethnically concentrated or mixed areas can already arise as a consequence of the mere composition of certain residential areas of people with certain characteristics, i.e. based on income, rent prices and ethnic preferences (on such selective migration to areas in the USA with higher ethnic or linguistic concentration based on status and income, cf. Jasso and Rosenzweig 1990: 325 f. and Stevens and Garrett 1994: 415 ff.; based on family structure, cf. Chiswick and Miller 1996: 32 ff.; and in particular based on language dominance in multi-lingual countries such as Canada, cf. Chiswick and Miller 1994: 122 ff.; on the differentiation of different types of spatial organization of ethnic groups cf. *inter alia* also Logan, Alba and Zhang 2002). Thus, ethnic concentration can only be said to have an “effect” on language acquisition if these population composition effects are statistically controlled. Almost without exception, the available empirical studies on the correlation between language acquisition and ethnic concentration (and group size) report such genuine effects of ethnic concentration on L2 acquisition (cf. Mirowsky and Ross 1984: 559, Figure 1; Stevens 1992: 179 ff.; Chiswick 1998: 262 ff.; Chiswick and Miller 1992: 234 ff., 240, 1995: 259 f., 1996: 24, Table 1, 1999: 74, 2002: 18 ff.; Chiswick and Repetto 2001: 215; Dávila and Mora 2000a: 375, Table 2, 2001: 86, Table 2; Espenshade and Fu 1997:

296, Table 1; Lazear 1995: 35 ff.; Portes and Rumbaut 2001b: 125, 127; Dustmann and Fabbri 2003: 705 f., Table 4). Also noteworthy here are the repeatedly observed *interaction* effects between ethnic concentration and other factors that are relevant to language acquisition (cf. also Chapter 3.3). The general result is a clearly identifiable *reinforcement* of the circumstances from the migration biography which are *disadvantageous* to L2 acquisition, in particular in relation to duration of stay, age at migration and education, by the simultaneous integration in an ethnically concentrated living environment. The findings are also similar across very different immigrant groups, both genders and for the different language forms and can be found in all of the receiving contexts studied: i.e. the USA, Canada, Australia and Israel. In his broadly based comparative international study, van Tubergen (2004a: 107) also finds that the (relative) group size of the relevant immigrant minority has a strong negative effect on L2 acquisition. It also emerges here that, as a proxy measure for ethnic concentration and the institutionalization of ethnic communities, the negative effect of the group size declines in intensity with the increase in group size and converges towards a lower value for L2 incompetence.

Studies have also been carried out on the effect of ethnic concentration in the Federal Republic of Germany. If they still actually exist after controlling for the relevant migration-biography variables, however the effects of ethnic concentration in Germany have repeatedly been shown to be weaker than in other countries. In some older studies, in particular on the effects of the socio-spatial embeddedness of immigrants on their language acquisition (and on other integration variables), the socio-spatial effects of ethnic concentration disappeared when duration of stay, age at migration and education were controlled for (cf. in particular Esser 1982, 1986; cf. also, in particular, Alpheis 1990). By way of explanation of this divergence from the situation in other receiving countries, these studies assume that the institutionalization of ethnic communities in Germany has not yet progressed sufficiently. In a subsequent analysis of the data of the SOEP (Sozio-oekonomisches Panel/Socio-economic Panel, see note on page 103), following the corresponding multivariate controls, Dustmann (1997: 256 ff.) also only observed minimal effects on the part of ethnic neighbourhoods, and in a more recent analysis, also based on the SOEP, Drever (2004: 1434, Table 5) also failed to find any special effects of socio-spatial variables on linguistic (and other) integration.

► Ethnic concentrations hinder language acquisition

It is now no longer certain as to whether the special situation in Germany, where as opposed to other immigration countries ethnic concentration in the living environment has no effect on language acquisition worthy of mention, actually exists or continues to exist. Unlike in previous studies, in which the effect of ethnic concentration was operationalized through the subjective assessment by participants in the SOEP survey, in a recent analysis of the SOEP data, in which it was possible to use *official* statistical data to operationalize ethnic concentration (for the first time), Jirjahn and Tsertsvadze (2004) observed independent and statistically significant effects. In fact, they observed exactly the same interaction effects of ethnic concentration with duration of stay, age at migration and education as can be deduced from the theoretical model of language acquisition and have

been regularly observed, for example, by Chiswick and Miller. For technical reasons involving data transfer, the operationalization through objective ethnic concentrations in Jirjahn and Tsertsvadze's study, only relates to the level of the federal German *laender* (i.e. regions), thus it is not possible to draw direct conclusions with regard to the (causal) significance of this correlation. The analysis shares this problem with all of the context comparisons if the covariation of possible relevant characteristics is high, as must be assumed for the *laender* level. Because, however, context effects usually tend to be *underestimated*, if the context entities are (too) wide-ranging, and because the relations coincide in detail with the otherwise observed relations, it is possible to state with all the necessary caution that there is serious evidence that a special German "case" in relation to the effect of ethnic concentrations on language acquisition probably does not (now) exist. Analyses based on smaller spatial areas which would ultimately settle this question have not yet been carried out.

Interaction within the family probably provides the most important point of access to opportunities for language acquisition (cf. Jasso and Rosenzweig 1990: 334 f.). Added to this is the fact that access occurs here at the earliest possible age at migration and thus under the circumstances of a particularly strong learning efficiency. In this respect, the language skills of the parents and the everyday *language use in the family* should have strong

► Family languages: the second language proficiency of immigrant parents benefits their children

effects on the L2 acquisition of the children (cf. also the discussion of bilingualism in Chapter 4). The most enlightening contribution to be made on this topic up to now is that by Bleakley and Chin (2004a). According to this study, the age at migration of the parents has obvious indirect *late* effects for their children (cf. comments in relation to family and migration biography): a lower level of second language proficiency due to an advanced age at migration on the part of the *parents* and the associated predominant use of L1 within the family result in a lower and less efficient level of L2 access and this in turn has an obvious effect on the L2 acquisition of the children. The effects of the L2 legacy of the age at migration of the parents and the language used by the family *vary*, however, with the *age of the children*: The (disadvantageous) effects on the children of an advanced age at migration of the parents are considerably *stronger* in the early years of life than at a later stage; particularly negative effects arising from the advanced age at migration of the parents may be expected in the context of pre-school processes in particular. In an earlier analysis, Portes and Rumbaut (2001b: 138 ff., in particular Tables 6.6 and 6.7) observed that the regular use of the *native* language within the family promotes the attainment of competent bilingualism. This would initially appear to be anomalous in the context of the other observed correlations. The problem is resolved, however, when attention is paid to the effect on L2 acquisition (English), *irrespective* of whether English is mastered on a monolingual or bilingual basis: both the English skills of the parents and the frequency of use of English within the family *promote* the monolingual *and* bilingual L2 skills of the children (on the possible false conclusions in the analysis of bilingualism, cf. also Chapter 4.2).

The same pattern is also observed by Bleakley and Chin (2004a, 2004b) for the effect of the *L2 language proficiency of the parents* on the L2 competence of their children. The conse-

quences are very similar to those observed in the case of the age at migration of the parents: a low level of L2 language proficiency on the part of the parents has a particularly strong effect on *younger* children. However, the deficits arising from an advanced age at migration or poor L2 skills of the parents are later apparently compensated by other influences, for example peer-group contacts and school influences. Nevertheless, because much is already defined at an *early* age by a child's school performance and the subsequent path dictated by it and because the L2 skills acquired in the family context have a crucial role to play here, these early deficits can have a very serious consequences, for example for the later school performance and success of the children. Thus, the *future* compensation of the disadvantages in L2 competences, which take effect from around 10 years of age, is irrelevant in this context.

Family and intra-ethnic (marriage) *partnerships* constitute a special case of an (intra-) ethnic context. Thus, it may be expected that the tendency to acquire L2 skills is less strong in the context of intra-ethnic relations than in the case of inter-ethnic (marriage) partnerships. This has also been empirically demonstrated by a significant number of studies (cf. Grenier 1984: 542 ff.; Stevens 1985: 79 ff., 1992: 180 ff.; Stevens and Swicegood 1987: 78 ff.; Stevens and Schoen 1988: 273 ff.; Chiswick 1998: 262 ff., Chiswick and Miller 1995: 255 f.; Chiswick and Repetto 2001: 210 ff.; Chiswick, Lee and Miller 2002a: 12 f., 2004; Dustmann 1994: 145 ff., 1999: 308 ff.; Espenshade and Fu 1997: 296, Table 2; Shields and Wheatley Price 2002: 146, Table 2). It has been shown that marriages which take place *prior* to migration (as an indicator for the presence of an intra-ethnic marriage) frequently have (clearly) negative effects on L2 acquisition, and this phenomenon is particularly evident in lower educational strata (Stevens and Schoen 1988: 274 f.). As opposed to this, family status alone (i.e. married or unmarried) has hardly an effect on language acquisition. It would even appear to be the case that inter-group marriage constitutes one of the most sustainable circumstances which results in a change in language behaviour and, as a result of this, in the entire spectrum of social integration (on this point, cf. Lopez 1999: 219 f.). Against this background, there is evidence that the two aforementioned effects of ethnic concentration in the living environment are more or less entirely mediated through the family structures which often co-vary with it. In their study on the effect of ethnic networks and, in particular, inter-group marriage, Chiswick and Miller find that the initially strong effect of ethnic concentration on language acquisition (speaking, reading, writing) disappears when inter-group marriage is controlled for (Chiswick and Miller 1996: 24, Table 1; cf. also Stevens 1992: 180, Table 3, who does not find this mediator effect). In terms of the (negative) effects of intraethnic (marriage) partnerships on L2 acquisition, in their synopsis of the findings for Australia, the USA, Canada and Israel, Chiswick and Miller (1995: 275, Table 6) also observe a high overall correspondence in the international comparison. Only Hayfron's study (on Norway) fails to find any effects of intra-ethnic marriage (2001: 1975, Table 2). Thus, in general, the central mechanism appears to be the concomitance of language usage and acquisition between parents and children and between the children as siblings (cf. Chiswick, Lee and Miller 2004: 45, Table 7). Overall, the findings fit in well with the more general and established insights from the sociology of the family, such as those of "assortative mating" among partners/spouses and the different age-based attachments of children to parents and other reference environments.

The findings on the special effects of the presence of *children* on (the) second language skills (of the *parents*) are inconsistent. Some studies report no particular effects in this instance (for example, Chiswick and Miller 1995: 255 f., Table 1; Dustmann 1994: 145, 149, Tables 4 and 5), while others observe that the presence of children enhances the L2 competence of parents, particularly if the children were born in the receiving country (cf. Chiswick 1998: 262, Table 4; Chiswick and Repetto 2001: 214 ff.; Dustmann 1999: 311, Table 5, however only in the case of children over six; Shields and Wheatley Price 2002: 146, Table 2). The unclear empirical effects of the presence of children probably have something to do with the opposite effects arising from them (cf. Figure 3.1 above): on the one hand, children constitute an incentive for L2 acquisition and give rise to a separate source of access to the L2 while, on the other, they can act as interpreters for their parents and thus reduce again their incentive to learn the L2. The concern of parents about a certain alienation from their children if the native language is no longer valued within the family may also play a role here (on these opposing mechanisms of the effect of children on parents' language acquisition, cf. Chiswick, Lee and Miller 2004: 7 f.; on the importance of the native language for intra-familial social control cf. also Chapter 5.2 and, in particular, the study by Mouw and Xie 1999).

There are very few empirical studies in which the important variables and levels considered on the basis of the theoretical model of (L2) acquisition are collated and compared in terms of their relative strength, although the studies by Chiswick and his co-authors, in particular, exploit all of the information provided by the official (micro) census data. However, the above-reported individual findings are confirmed by all of the studies which incorporate the relevant variables (although exceptions can be found, as always). Reference is made here in particular to the overview provided by Espenshade and Fu (1997: 296 f., Table 2). Other overviews can be found in Bean and Stevens (2003: 162, Table 7.5), Jasso and Rosenzweig (1990: 321 f., Tables 8.7 and 8.8; also for a comparison between 1900 and 1980), Portes and Hao (1998: 277 ff.), Portes and Schauflier (1996: 15 ff., Table 2.1), Portes and Rumbaut (1996a: 210 ff., Tables 29 and 30), Shields and Wheatley Price (2001: 743, Table 1), Shields and Wheatley Price (2002: 146, Table 2) and in the various contributions by Chiswick and his co-authors. Van Tubergen's internationally comparative study is (hitherto) the only study which also takes the contextual influences of the country of origin, the receiving country and ethnic group into account in a broader framework (cf. van Tubergen 2004a: 104, Table 4.9, Model 2). Most of the other contextual effects examined in addition by van Tubergen (2004), such as the effects of the political climate, of social distance in the receiving country and of group size and the ethnic concentrations which are often associated with it, have already been mentioned in the relevant sections above. Even if some important variables are lacking, in particular those relating to individual circumstances in the family and migration biography, for example the presence of an intra-ethnic partner/spouse, what we have here (like in the overview by Espenshade and Fu 1997) is the – very impressive – confirmation of the theoretical model and of the empirical findings of the various individual studies on the social conditions of L2 acquisition among immigrants and, moreover, a study which is based on a global perspective and systematically incorporates the most varying contexts of language acquisition.

3.3 Special constellations

In terms of the social conditions of L2 language acquisition and processes of social integration of immigrants in general, certain constellations and aspects are of particular interest because they combine particularly striking and relevant patterns of social conditions. These include, in particular, the basic demographic categories of generation membership, origin or nationality and gender. In relation to language acquisition, the characteristics arising from the different forms of language (understanding, speaking, reading, writing) should also be noted. These also include the findings on the (statistical) interaction of the most important social circumstances and the stability of relationships across different contexts and historical periods (based on a comparison between each of the single contexts and not only on the overall aggregation across the different contexts and levels, as is mostly the case in van Tubergen 2004).

Forms of language

Understanding, speaking, reading and writing are the four key forms of language which determine (complete) linguistic proficiency (cf. Chapter 3.1). “Book knowledge”, such as reading and, in particular, writing, plays a very important role in the context of the more elevated positions on labour markets. The most important overall finding of the studies on the forms of language is that there is no significant difference between the basic determinants and relations of the four forms: duration of stay, age at migration and education (obtained prior to or after migration) and, possibly with the exception of the German context, ethnic concentration always remain significant in this context (cf. Chiswick 1991: 159 ff., 1998: 73 f.; Chiswick and Repetto 2001: 215; Dustmann 1994: 145 ff., 1997: 252 f.; Gonzalez 2000; Hayfron 2001: 1975 f.). However, some differences were observed, about which consensus prevails in the studies. The most important of these would appear to be the importance of education: it has a greater effect on reading and literacy than on oral language skills, i.e. fluency. The same applies for the effect of the age at migration: this has more obvious effects on the acquisition of written language than on understanding and speaking. As is often the case, the presence of interactive influences may also be assumed: educational attainment provides better access to written language acquisition which, in turn, facilitates and reinforces educational attainment. Moreover, there are indications that everyday contacts, for example in the neighbourhood or place of work, tend to be beneficial to understanding and speaking and that more “systematic” and more strongly controlled forms of access, such as individual language training, are required for the acquisition of reading and writing skills (cf. in particular Dustmann 1994: 148 f.). This also explains the repeatedly confirmed finding of Chiswick (and his various co-authors) that ethnic concentration has a clearly less marked effect on the acquisition of reading skills than on oral proficiency (Chiswick 1998: 74; Chiswick and Repetto 2001: 214 ff.).

Generation

The most stable empirical correlations in language acquisition are regularly observed for *generation*-based differences, even after controlling for age at migration as the most obvious of

the background conditions associated with generational status. The second generation generally has considerably better L2 skills than the first generation even when the relevant background variables are controlled for (cf., for example, Portes and Rumbaut 1996a: 216 ff., Table 32, 2001b, 127 ff., Table 6.4), and the third generation generally fully adopts the relevant national language (cf. Lopez 1982a and c, 1996: 147 ff., 1999: 219 f. and the above-reported findings by Alba 1999, also Alba and Nee 1999 on the intergenerational integration of different ethnic groups in the USA in general and also for a longer-term historical

► **Clear linguistic assimilation, generally as early as the second generation**

comparison; cf. also Chapters 4.1 and 4.2 for the empirical distribution of the four types of language competence in dependence on age at migration and generation). Correspondingly, in an analysis of the SOEP data across the survey waves from 1983 to 2001, Diehl and Schnell (2004, 2006) also observe this familiar pattern in Germany – even in the case of Turkish immigrants: i.e. as is the case with almost all other integration variables, the second generation virtually makes a jump to assimilation in L2 acquisition and this finding is stable across all immigrant groups, all cohorts and all periodic fluctuations. *All* four basic theoretical components are involved in the clear correlation between generational status and L2 acquisition: motivation is greater because from the perspective of a lifetime the rewards are greater than is the case with arrival in the receiving country at an advanced age; the second generation already enjoys greater access to L2 learning opportunities in terms of the structurally available opportunities for inter-ethnic contact and L2 learning opportunities; because of the low age at migration, in particular, learning efficiency is (significantly) higher than in the first generation; finally, resistance and costs are diminished due to the generally smaller cultural and social distances. These conditions need, of course, not always be fulfilled empirically. However, the link between generation and L2 acquisition probably also remains so stable across the contexts because the four components of second language acquisition are mutually supportive; thus they reinforce each other cumulatively in their effects and can complement each other when individual empirical conditions, which are sometimes also effective, are not fulfilled.

Nationality

Significant differences in L2 acquisition are mostly identified on the basis of the nationality of immigrant groups. Significant differences in the language competences of immigrants from different countries of origin are also observed by van Tubergen (2004a: 100), who, however, also notes variations for this difference within one and the same ethnic group which are not exactly negligible (cf. van Tubergen 2004a: 100, Table 4.6). However, these differences can almost always be explained when the most important circumstances of migration and family biography are controlled for. A complete (statistical) explanation of the ethnic-national differences in language acquisition by the standard variables of language acquisition (cf. overview in Figure 3.1) would indicate that, apart from family and migration-specific obstacles or advantages, there are no particular other influences associated with national or ethnic origin and other unquantified influences (on this point, cf. the findings of Espenshade and Fu 1997: 296, Table 2). It is only when differences are found

after such controls that it is possible to refer to effects of nationality on language acquisition.

However, if *no* further explanation can be found for ethnic/national differences, a number of causes are conceivable: the culturally rooted valuation of learning and language as an intrinsic value, various combinations of L1 and L2 Q-values, the usability of the relevant L1 in an ethnic community, cultural, social and spatial distances, discrimination or the effect of the institutional completeness of ethnic communities which may divert attention from (linguistic) investments and the associated mobility traps. Unlike in the case of “generation”, the combinations loosely associated with the proxy variable “nationality” are not always consistent or stable. Some groups are very distant from education and a low age at migration while the opposite may be true of others. Based alone on the fact that the compositions of immigrant populations (can) constantly change, it is not possible to expect any real stable effects of “nationality” or membership of an “ethnic” group on language acquisition, but, at most, the disappearance of these differences when the relevant background variables are controlled for.

► It is not always possible to explain differences between nationalities

With regard to ethnic or national differences in *linguistic* (L2) skills, the *linguistic distance* between an L1 and an L2 and the associated *structurally* determined reduction in the efficiency of language learning in the new environment constitutes the most plausible background factor that *exclusively* refers directly to ethnic/national characteristics – also following control of all of the empirically demonstrable and important background factors (cf. Chiswick and Miller 2002, 2004). Of course, this does not mean that there are not always other or new factors that cause the emergence of such differences as those associated with the use value of the language, in particular its Q-value, or its usability in the context of ethnic networks and communities. With the increase in the opportunities for transnational relations, for example through media contact or ongoing contact with the country of origin, integration into a specific ethnic context also increases and this can give rise to some of the ethnic-national differences in L2 acquisition. The case of Turkish immigrants in Germany, for whom the relevant linguistic distance is greater than for other groups, the Q-value of whose native language is relatively low and the intra-ethnic use value of whose language is relatively high based on the size of the group alone, is also indicative of such – here – consistent and stable differences based on the nationality of the origin society and possibly also of the effects of social distances between the native, i.e. German, and Turkish populations, which act as costs and thus can also affect language acquisition. The (exclusive) explanation of differences in language acquisition based on nationality by linguistic distance is not, however, undisputed (cf. the aforementioned findings in Carliner 1995). The examples of the differences in language acquisition between immigrants of different national origins, which have not yet been satisfactorily explained, include, most notably, the success of some Asian immigrant groups in the USA which tend to achieve monolingual assimilation without particular difficulty, despite having the most significant linguistic distances to overcome (on this point, cf. Chapters 4.2 and 5.2).

Gender

Little is reported about *gender*-based differences in L2 acquisition in the systematic studies on language acquisition by immigrants, and when the topic is broached, the findings are far from unequivocal (cf. for example Chiswick and Miller 1999: 73 f., Table 5 which contains a special and also gender-based comparison of legal and illegal immigrants; for an explanation of the contradictory findings on the gender effect, cf. also Espenshade and Fu 1997: 290 f.). If reported at all, the effects are usually minimal although a certain tendency exists for female immigrants to learn the second language slower than their male counterparts. One of the few systematic indications of gender differences in language acquisition can be found in the analyses of the SOEP data by Dustmann (1994, 1997). In terms of the gender-specific *effect* of education on L2 acquisition, he observed that female immigrants generally start with fewer L2 skills than male immigrants but quickly make up for this deficit if they come into contact with the host society and, in particular, if they receive further education or training *in the receiving country* (cf. in particular Dustmann 1997: 253 f.). Like the effects of nationality, it is difficult to explain those gender effects that remain when the relevant background variables have been controlled for. After considering the structural disadvantages based on duration of stay, age at migration, education and social context, the most plausible are cultural factors such as role concepts and their control by family and relations that are responsible for the gender differences. Due to the often strong association of gender role models with national value orientations and traditions, it is basically only possible to interpret nationality-specific differences, as is the case in Dustmann's analyses, however due to the resulting rapid decline in sample sizes, it is often not even possible to analyse these differences any further. This also explains why there are so few systematic findings on this question. Of course, the possibility should not be discounted that the difference between the genders in terms of (second) language acquisition, at least, are minimal.

Generation, nationality and gender

The categories of generation, nationality and gender can, in turn, combine to form very special patterns of (implicit) ancillary conditions of language acquisition, for example based on linguistic (or cultural and social) distance and corresponding nationality-specific role models. However, it would have to be expected (for both L2 acquisition and for other indicators of social integration) for such interactions between generation, nationality and gender, which are almost infinite in their complexity, that the differences that can be clearly identified initially in bivariate distribution would diminish or even entirely disappear after controlling for the background variables. Such analyses are almost inexistent in the literature, often for the simple reason that in the studies or publications it is generally not differentiated on the basis of generation (as is the case with the CILS study), or because the sample sizes would rapidly emerge as being too small for several nationalities to allow for a more precise (sub-group) analysis (as is the case with the SOEP), although, as demonstrated by Diehl and Schnell 2004 (cf. also Diehl and Schnell 2006) based on the SOEP data (cf. above), such analyses would be possible in principle as long as information is

available about the country of birth of the parents and age (of arrival). Following the emergence of initially strong bivariate differences on the basis of the country of origin (Turkey versus former Yugoslavia), first and second generation and gender – and with control of the relevant background variables – separate analyses of the interaction of generation, nationality and gender using the KITTY database (cf. page 102) resulted in the almost complete disappearance of all of these differences in the second generation. It should be added that the relatively problem free and complete social integration into the host society identified on the basis of the KITTY database at that time (1987) is not applicable to inter-ethnic relations or to ethnic identification in the same way as it is for language (cf. Esser 1990a): despite the progress they made in the area of linguistic integration, the Turkish immigrants remained considerably more strongly oriented towards their own group in terms of social contacts, cultural habits and emotional ties than the other nationalities. This is ultimately also confirmed in more recent analyses, for example of the SOEP data by Diehl and Schnell (2004, Figures 1, 3, 6-9; 2006). At the same time, there is *no* evidence *whatsoever* that the differences would intensify in the course of time. Indeed, the opposite tends to be the case, and it is in no way possible to refer a re-ethnification of younger Turks (and other groups), at least when their *individual* (family) biographies are considered over the course of time.

In short: *all of the evidence* from the available *systematic* empirical studies, for example for Germany based on the KITTY study of the situation up to the late 1980s and the SOEP study for the period 1984 to 2003, would indicate, from a general perspective at least, that the Turkish immigrants, who are probably the most comparable group with the Mexican immigrants in the context of US migration, ultimately follow the path taken by all of the groups involved in both the “old” and “new” immigration processes: i.e. the path of (linguistic) “assimilation” with all of its associated consequences for the structural integration of the access to the more central areas of the labour market and institutions. The adoption of this route may not happen immediately, but follow a lengthy process which can take several generations to complete. This is definitely the case when the biographies of individual immigrant families are traced back through the generations – and when the focus is no longer on the groups that are repeatedly replenished by first-time immigrants through new waves of migration. Thus, impressionistic case descriptions, dramatizing observations, for example of neighbourhoods that act as temporary assembly points for immigrants in difficult situations and simple bivariate descriptions paint a picture that is often completely at odds with the real situation and developments – and not just in this context.

Interaction effects

Reference is made in various parts of this report to the (statistical) interaction between the different conditions of L2 acquisition. Such interaction effects are extremely important, particularly in the context of practical measures: it is only in certain *combinations* that changes in the (ancillary) conditions can take effect, and constellations also exist, within which certain measures emerge as largely ineffective or especially efficient. Hypotheses regarding the existence and direction of interaction effects between the standard variables

of (second) language acquisition are directly derived from the theoretical model of language acquisition and its translation into a statistical regression model (cf. Chapter 3.1; on a different theoretical explanation of the interaction effects observed by Chiswick and Miller,

► Ethnic concentrations in the living environment make acquisition of the national language more difficult, particularly for already disadvantaged immigrants

cf. Jirjahn and Tsertsvadze 2004: 148). Of particular interest here is the interaction between the circumstances of the family biography and ethnic concentration: does ethnic concentration tend to hinder or promote L2 acquisition when the other circumstances are unfavourable? According to the

theoretical model, a positive interaction between ethnic concentration and duration of stay and educational attainment may be expected, and a negative one with age at migration. In terms of content, this means that the negative effects of ethnic concentration are attenuated when combined with a longer duration of stay and higher educational attainment and reinforced when combined with an advanced age at migration. Empirical evidence can be found for the interaction effects that may be expected from the theoretical model for a total of five constellations (cf. Chiswick 1991, 1998; Chiswick and Miller 1992, 1995; Jirjahn and Tsertsvadze 2004): i.e. duration of stay and age at migration, duration of stay and educational attainment, ethnic concentration and duration of stay, ethnic concentration and age at migration and ethnic concentration and educational attainment.

The substantial result is easy to summarize and rather alarming: the effects of the unfavourable conditions of lower educational attainment, shorter duration of stay and advanced age at migration are particularly heightened by increased ethnic concentrations:

“The *adverse* effect on English-language skills of living in an ethnic-language enclave is *greater* for those with *less* skill – that is, less schooling, or for more recent arrivals who immigrated at an older age. These are the immigrants with the *lowest* language facility, *ceteris paribus*.” (Chiswick and Miller 1992: 241; italics added by the author of this report)

However, an optimistic view of the same correlation also exists: the improvement of the circumstances, i.e. the reduction of ethnic concentration, is (relatively) more beneficial to those immigrants who are (otherwise) at a greater disadvantage. Thus, if the logic of these findings is followed through, in terms of the language acquisition of immigrants at least, it is entirely possible to break the vicious circle of the cumulation of bad conditions: i.e. through the improvement of even one of the bad conditions, in particular that of high ethnic concentration (cf. also Chapter 5.1 on the very similar (interaction) effects for ethnic concentration in schools and classrooms).

The stability of the findings

The empirical findings on the conditions of L2 acquisition tally – almost without exception – with the theoretical hypotheses of the approaches used to explain L2 acquisition. While they are not based on a very high number of studies, they do refer to very different periods of time and national host-society contexts as well as very different ethnic groups and countries of origin and, above all, large data sets with statistically stable results. Chiswick and Miller, in particular, very consciously compared highly contrasting receiving contexts with each other, including specifically the USA and Canada, but also Israel and Australia,

i.e. countries with clearly different migration policy approaches. Comparable results are available for Germany from the analyses of the SOEP and the, albeit older, KITTY databases. This makes it possible to also explore the issue of the generalizability of the correlations also *within* the *different* contexts (in contrast to van Tubergen’s study (2004a) which examines the *aggregated* correlations across all of the contexts; on the stability of the central correlations through *temporal* comparison, cf. also Chiswick, Lee and Miller 2002c). In reference to the overview provided by Chiswick and Miller (1995: 275, Table 6), Table 3.1 below presents a summary overview of the most important findings on the variables that influence L2 acquisition based on the international comparison of data relating to Australia, the USA, Canada, Israel and Germany.

Table 3.1: Comparison of the effects of the relevant variables on second language acquisition in a range of receiving countries

Variables	Australia		USA	Canada	Israel	Germany	
	1980	1986				SOEP	KITTY
Duration of stay	+	+	+	+	+	+	+
Age at migration	–	–	–	–	–	–	–
Education	+	+	+	+	+	+	+
Ethnic concentration	–	–	–	–	–	–*	–*

Note: * Effect not consistently confirmed

Source: for Australia, USA, Canada and Israel: Chiswick and Miller 1995: 275, Table 6; for Germany: Dustmann 1997: 256 f., Tables 6 and 7 for the SOEP, 3rd wave (1987); author’s own re-analysis of the KITTY database, based on Esser and Friedrichs 1990; Drever 2004: 1434, Table 5; Jirjahn and Tsertsvadze 2004: 154 f., Table 4.

The result is clear: all of the four central variables compared for their influence on L2 acquisition have significant effects in the theoretically expected direction in all of the compared contexts. In Germany alone, the findings on the effect of ethnic concentration are not consistent (on this point, cf. Chapter 3.2): such context effects were not observed in the KITTY study that was particularly designed to enable the analysis of such context effects, and in some analyses based on the SOEP data (by Dustmann and Drever) ethnic concentration was found to have no context effects on language acquisition anymore after controlling for relevant individual variables. Such effects have only been observed in a recent analysis of the SOEP data by Jirjahn and Tsertsvadze which also incorporated official statistical data on ethnic concentration, however (up to now) these effects have only been demonstrated at a geographically very spacious level.

An analogous comparative overview also on the *interaction* effects of duration of stay, age at migration and education with ethnic concentration can be found in Chiswick and Miller (1995: 275, Table 7; cf. Table 3.2). The findings for Germany are also included here and are largely based on the analysis of the SOEP data carried out by Jirjahn and Tsertsvadze

(2004), which provide the only evidence up to now that such interaction effects also exist in Germany, as previous studies and analyses were unable to prove any significant effects of ethnic concentration on language acquisition.

Table 3.2: International comparison of the interaction effects on language acquisition

Variables	Australia	USA	Canada	Israel	Germany*
Ethnic concentration	–	–	–	–	–
~ and age at migration	–	–	–	–	–
~ and duration of stay	+	+	+	+	+
~ and education	+	+	+	+	+

Note: * Effect not consistently confirmed

Source: for Australia, USA, Canada and Israel: Chiswick and Miller 1995: 275, Table 6; for Germany: Dustmann 1997: 256 f., Tables 6 and 7 for the SOEP, 3rd wave (1987); author's own re-analysis of the KITTY database, based on Esser and Friedrichs 1990; Jirjahn and Tsertsvadze 2004: 154 f., Table 4

It should be added that, with the exception of small variations in the intensity of the effects, the findings on language acquisition are also applicable to some special groups of immigrants, such as immigrants whose status was eventually legalized, sometimes after a long background of illegal immigration (Chiswick 1991; Chiswick and Miller 1999), for veterans of the US army (Chiswick and Miller 1992), for refugees (Carliner 1995: 25; Hayfron 2001: 1975; Chiswick and Wenz 2004: 10 f.), for temporary (Dustmann 1999) and transnational immigrants (Massey 1986, 1987). While special conditions also exert an influence here, for example a clear motive for return to the country of origin, when they are held constant, the basic variables for the explanation of differences in L2 acquisition always exert an effect in the theoretically expected direction and almost always to a significant extent. This is also a clear indication of the fact that the empirical correlations between social conditions and second language acquisition are not associated with special circumstances, but would appear to follow a general mechanism. Insofar as the findings even coincide with the details of the theoretical model of language acquisition, this can also be viewed as a confirmation of the corresponding conceptual assumptions.

4. Bilingualism

Bilingualism means the mastery of *two* languages: the native language, i.e. L1, and an additional second language, i.e. L2, which is learned simultaneous or subsequent to the first. Different constellations can exist in this context, depending on the combination of the L1 and L2 skills involved. Most commonly, the typology which emerges is that shown in Figure 2.1 in Chapter 2 which comprises linguistic marginality or limited bilingualism, monolingual segmentation, monolingual assimilation and competent bilingualism, (on these and other differentiations and variants of bilingualism and multilingualism in general, cf. *inter alia* Verhoeven 1987: Chapters 2 and 3; Baur and Meder 1992: 111 f.; Romaine 1999: 252 ff.; Tracy and Gawlitzek-Maiwald 2000: 496 ff.; Belliveau 2002: 13 ff.; Jampert 2002: 64 ff.; Gogolin, Neumann and Roth 2003: 38 ff.; Reich and Roth 2002: 35 ff.). This chapter begins by clarifying the basic mechanisms of bilingualism, then systematizes the available empirical findings on the subject and finally explores some controversies surrounding bilingualism, some of which remain open today.

4.1 Basic mechanisms

If it is assumed that immigrants have generally already attained a certain level of proficiency in their native language, the task of explaining competent bilingualism is *firstly* reduced to the question of explaining L2 acquisition or linguistic assimilation. It cannot, however, be automatically assumed that immigrants maintain a certain level of L1 competence. Thus, the clarification of bilingualism always involves the explanation of the *retention* of the (L1) *native* language as opposed to its abandonment. This process is also referred to as *language shift* (also: “minority language shift”, “mother-tongue-shift”, “language loss” or “first-language-attribution”). The alternative is the retention of the native language which is also referred to as “minority language retainment” or “language-maintenance” (on this point, cf. *inter alia* Fishman 1966: 392 ff.; Veltman 1983: 171 ff.; Bean and Stevens 2003: 164 ff.). With regard to the term “language shift”, it is important to differentiate between two associated meanings which are not always made explicit. The first of these concerns the (usual) perspective on the *individual* changes among immigrants and their statistical aggregation which can be described and explained as changes in the *distribution* of L1 and L2 language skills based, for example, on nationality or generation. In addition to this, however, language shift is also understood as the outcome of a *collective* and *interactive* process of diffusion of language preferences and language use, i.e. as a process of societal *language change*. It is assumed here that the (linguistic) behaviour of some people is registered by others and this, in turn, has consequences for the actors and can lead to certain equilibria in the collective spread of languages and also their complete disappearance or decline to an extreme minority position (cf. *inter alia* Linton 2004). However, the explanation of language shift among the *individual* actors always constitutes the theoretical basis for *both* of these processes (for details on this, cf. Esser 2006: Chapters 4.4 and 7.5). If L2 proficiency already exists, the task of explaining bilingual competence is transferred to language shift. What is involved here is the selection between the alternatives

of the *abandonment* of the first language (L1s) (“language shift”) as opposed to its *retention* (L1r) (“language retention”). The process can be viewed as a special case of the general model of language acquisition from Chapter 3.1, as a function of access, motivation, efficiency and cost: like any other skill, retention of L1 competence requires access to the relevant contexts and when the benefits arising from the use of the native language decrease, the tendency to retain it also declines – *ceteris paribus*. To this is added the possible costs associated with L1 use in the new environment, for example social disapproval. Unlike in the case of L2 acquisition, the aspect of efficiency probably does not play much of a role here as what is involved is not the learning of a new skill but the retention of an existing one. It would become important, at most, if L1 acquisition or retention at a more advanced learning age is involved, for example in the context of programmes for the promotion of bilingualism

Theoretical and statistical modelling of the explanation of native language retention

The opportunities to use the L1 are expressed as $q(L1)$, the value of the mastery and use of the L1 as $U(L1)$ and the eventual costs as $C(L1)$. Based on the logic of the language acquisition model, this gives rise to the following relation for the weights for retention or abandonment of the native language, whereby an expected utility of zero is assumed in the case of the abandonment of the native language (i.e. for monolingual assimilation):

$$(4.1) \quad EU(L1r) = q(L1) \cdot U(L1) - C(L1)$$

$$(4.2) \quad EU(L1s) = 0.$$

Thus, the retention of the native language and competent bilingualism arise under the condition:

$$(4.3) \quad U(L1) \cdot q(L1) - C > 0.$$

Correspondingly, the statistical model for the estimation of the empirical effects would take the following form: there are three main effects: the motivation for the retention of the L1 $U(L1)$, the opportunities for this $q(L1)$ and the costs C ; to this is added the interaction effect $U(L1) \cdot q(L1)$. It corresponds to the general correlation according to which the (native) language can only be retained if the learners are sufficiently motivated *and* opportunities exist for the maintenance of the L1 in question.

among monolingually (L2) assimilated actors, whose (L1) native language should be fostered. The retention or abandonment of the native language L1 is a special case of the model of language acquisition from Chapter 3.1.

As is the case with second language acquisition, bridge hypotheses must be formulated linking the (henceforth: three) theoretical constructs of the basic model of L1 retention to the different social conditions of language acquisition or language shift: i.e. motivation, access and the

costs of L1 retention. The corresponding list in Figure 4.1 is based, in particular, on related comments in Portes and Schauffler (1996: 12 ff., 22 ff.); Portes and Hao (1998: 279 ff.); Portes and Rumbaut (1996a: 214 ff.); Zhou and Bankston (1998: 120 ff.); Nauck (2001: 167 ff.); Portes and Rumbaut (2001b: 134 ff.); Alba, Logan, Lutz and Stults (2002: 471 f.) and Bean and Stevens (2003: 164 ff). Based on this, again as in Figure 3.1 for L2 acquisition, the following relations can be assumed and classified in accordance with the four contexts of family and migration biography, country of origin, receiving country and ethnic context: the tendency for L1 retention increases with a temporarily planned stay, a short duration of stay, a more advanced age at migration, a high Q-value of the L1; a high cultural, geographical and social distance, an institutional promotion of the L1 in the receiving country, the absence of interethnic contacts, the availability of L1 media contact; transnational relations, ethnic concentrations and communities, a higher proportion of bilingual speakers in the environment, the maintenance of the L1 as the family language, ethnic endogamy and other intra-ethnic family relations, and strong family cohesion. Thus, these factors should explain the

emergence of competent bilingualism – *provided that* the acquisition of the language of the receiving country occurs (simultaneously or afterwards).

According to these bridge hypotheses on the links between the empirical conditions and the constructs from the model of language acquisition, a large number of precisely the circumstances under which L2 acquisition is rather *unlikely* to occur also simultaneously promote L1 retention. Based on this, a *negative* covariation between L2 and L1 skills could be expected, however not for logical reasons (cf. the empirical findings presented below). The only consistent *unidirectional* effect exists in the case of *intelligence* and, for this reason, it is highlighted in the diagram: it motivates and facilitates the acquisition of *both* languages. Because efficiency is no longer presented separately, this is shown in the diagram through a reduction of the costs of L1 retention.

Education represents a special condition for the emergence of competent bilingualism. Conflicting hypotheses exist in relation to this factor. On the one hand, the L1 tends to remain the everyday – and also socially controlled – lingua franca, particularly in the lower (educational) strata. On the other hand, the upper classes, in particular, may have an interest in the maintenance of the L1, if not for reasons of the retention of identity, for example among the educated elite of the first generation of immigrants, but because this could trigger particular gains, for example from transnational enterprises or through interethnic brokerage functions. This hypothesis on the particular propensity of the upper (educational) classes to retain their L1 (and therefore also to achieve competent bilingualism) is advocated, in particular, by Portes and Rumbaut (cf., for example, Portes and Rumbaut 1996a: 224 f.; cf. also the results presented by Zhou and Bankston 1998: 124 f. for L1 retention among Vietnamese immigrants in the USA based on the educational attainment of the father; and the findings of Nauck 2001: 169 on the upper educational classes among the “Aussiedler” (i.e. ethnically German migrants) in the Federal Republic of Germany and Russian immigrants in Israel). According to the opposing thesis represented, for example, by Alba, Logan, Lutz and Stults (2002: 473), educational attainment (of parents) is not expected to exert any consistent influence on L1 retention – in either one direction or the other.

Figure 4.1: Bridge hypotheses on the relation between the empirical conditions and constructs used in the explanation of the retention of the native language (L1)

	Motivation	Access	Costs	Competence	
				L1	L2
1. Family/migration biography					
Voluntary migration					+
Temporary migration	+			+	-
Duration of stay		-		-	+
Age at migration	+	+		+	-
Education (OC/RC)	+/-	+/-		+/-	+
Cultural capital (RC)					+
Intrinsic cultural value of L2					+
Intelligence			-	+	+
2. Origin context (OC)					
Q-value of L1	+			+	-
Access to L2 in OC/media contact					+
L2 language instruction in OC					+
Linguistic distance L1-L2					-
Cultural distance OC-RC			+	+	-
Spatial distance OC-RC	-	-	+	-	+
3. Receiving context (RC)					
Q-value of L2					+
Labour market RC					+
Social/institutional value of L2					+
Institutional promotion of L1 in RC	+	+		+	-
Collective good value of L2					(+)
Inter-ethnic contacts			+	-	+
Social distance RC-OC			+	+	-
Language courses in L2					+
4. Ethnic context					
Interpreters					-
L1 media contact	+	+		+	-
Transnational relations	+	+		+	?
Ethnic concentration/group size	+	+		+	-
Proportion of bilinguals in the region	+	+		+	-
Family language L1	+	+		+	-
Partner/spouse from same ethnic group	+	+		+	-
Family cohesion	+	+		+	
Children	+/-	+/-		?	?

Note: OC = origin context; RC = receiving context; L1 = first language; L2 = second language

4.2 Empirical correlations

There are very few empirical studies that enable the analysis of changes in the *native* language (and hence in bilingualism) in addition to the analysis of second language acquisition and that also incorporate at least some of the conditions specified in the theoretical model (cf. reference in Bean and Stevens 2003: 164). If at all, most report only on simple distributions across language types, for example as in Bean and Stevens (2003: 149 ff.) or in a recent study about the second generation of female immigrants in the Federal Republic of Germany carried out on behalf of the Federal Ministry for Family, Seniors, Women and Youth (BMFSFJ) (Boos-Nünning and Karakaşoğlu 2004: 288 ff.). Apart from these, the only systematic studies that would be suitable for multivariate analyses are the SOEP and the CILS project. However, nothing has yet been published on the basis of the SOEP that deals with the specific issue of explaining language shift and competent *bilingualism*. The same does not apply to the CILS Project. In this case, published findings exist on this topic (cf. Portes and Rumbaut 2001: Chapter 7), however they are not relevant to or useful in all cases in the context of the questions raised here. As a result, in addition to reporting on some of the published findings, the following summary of the empirical correlations is also based on re-analyses of the CILS and SOEP data. The summary starts with a description of the empirical distributions and pattern of retention of native language or (L1-) language shift over the course of generations. The findings on the conditions which lead beyond monolingual assimilation to competent bilingualism – which are based in part on the reanalyses – are then systematized against this background.

Language shift

Table 4.1 presents empirical data on the empirical distribution of bilingualism across the four types of language competence based on the few (larger) studies which include measurements of language competence in both the second language *and* the native language: i.e. from the National Educational Longitudinal Study (NELS) of 1988 for second-generation immigrants in the USA (cf. Mouw and Xie 1999: 241), from the CILS study for second-generation immigrants in California (author's own analysis based on results specified by Portes and Rumbaut 2001: 342), from the current study by the Federal Ministry for Family, Seniors, Women and Youth (BMFSFJ) (Boos-Nünning and Karakaşoğlu 2004: 289) for second-generation female immigrants in the Federal Republic of Germany and the author's own analyses of the SOEP data of the waves of 1984, 1993 and 2003, in the latter case analysed separately for “speaking” (s) and “writing” (w).

The most important result to emerge here is probably the fact that competent bilingualism occurs empirically very frequently and across all generations. Due to the nature of the measurement and dichotimization, however, it is not possible to identify very much from the simple distributions, particularly with regard to the question as to how many bilinguals and other speakers “actually” exist. At best, it becomes clear that all four types are represented and that competent bilingualism exists empirically, as does linguistic marginalization. However, a clear difference obviously exists between the different forms of

language: in the case of oral language skills, which are very important for everyday relations and activities, linguistic integration into the host society is entirely successful, including the acquisition of competent bilingualism. This is far less applicable in the case of written language, which is crucial for all forms of institutional contact and structural integration. It is, however, interesting to note that (in the cross-sectional analysis undertaken here) few changes can be observed over time (between 1984, 1993 and 2003), and the overall trend does go in the direction of linguistic L2 integration.

Table 4.1: The empirical distribution of bilingualism based on different studies containing information on first and second-language proficiency (in %)

		First-Language Proficiency			
		High		Low	
Second-language proficiency	High	Multiple inclusion/ competent bilingualism		Assimilation/ monolingual assimilation	
		CILS	23	CILS	40
		NELS	37	NELS	39
		BMFSFJ	31	BMFSFJ	36
		SOEP (s) 1984*	25	SOEP (s) 1984	17
		SOEP (s) 1993	30	SOEP (s) 1993	21
		SOEP (s) 2003	30	SOEP (s) 2003	22
	SOEP (w) 1984**	12	SOEP (w) 1984	12	
	SOEP (w) 1993	12	SOEP (w) 1993	15	
	SOEP (w) 2003	12	SOEP (w) 2003	13	
	Low	Segmentation/ monolingual segmentation		Marginality/ limited bilingualism	
		CILS	16	CILS	21
		NELS	16	NELS	10
		BMFSFJ	18	BMFSFJ	15
SOEP (s) 1984		30	SOEP (s) 1984	28	
SOEP (s) 1993		24	SOEP (s) 1993	26	
SOEP (s) 2003		21	SOEP (s) 2003	27	
SOEP (w) 1984	32	SOEP (w) 1984	44		
SOEP (w) 1993	27	SOEP (w) 1993	46		
SOEP (w) 2003	27	SOEP (w) 2003	47		

Notes: The proportions in % (rounded up/down in part), all add up to 100% per (part) study across the four types of linguistic integration; s = speaking; w = writing; sample sizes: N(CILS) = 3741, N(NELS) = 825, N(BMFSFJ) = 950, N(GSOEP (s) 1984) = 2616, N(GSOEP (s) 1993) = 1279, N(GSOEP (s) 2003) = 601, N(GSOEP (w) 1984) = 2605, N(GSOEP (w) 1993) = 1275, N(GSOEP (w) 2003) = 599
Source: CILS: author's own calculation; NELS: cf. Mouw and Xie 1999: 241; BMFSFJ: cf. Boos-Nünning and Karakaşoğlu 2004: 289; SOEP for the survey waves of 1984, 1993 and 2003: author's own calculation

Significant differences also exist between Turkish, Greek, Italian and (former) Yugoslav immigrants in Germany. These are presented in Table 4.2 for the SOEP survey waves of 1984 and 1993. The familiar differences emerge, in particular between the Turks, Italians and Greeks, on the one hand, and the (former) Yugoslavs, on the other: i.e. the marginalized situation of the Turks is again identifiable and the low level of (linguistic) integration among Italians, which was repeatedly observed in earlier studies, also emerges clearly. This is particularly applicable to written language skills and little changes over time (based on the aggregation of the two waves).

Table 4.2: Types of linguistic integration among different immigrant groups in Germany (1984 and 1993)

	Turks	Italians	Greeks	(former) Yugoslavs
1984				
Speaking				
Bilingualism	16	26	25	41
Ling. assimilation	15	21	20	15
Ling. segmentation	35	23	31	26
Ling. marginality	33	30	24	18
Writing				
Bilingualism	9	10	13	18
Ling. assimilation	11	13	15	11
Ling. segmentation	32	28	25	43
Ling. marginality	49	49	46	29
N	1011	548	454	603
1993				
Speaking				
Bilingualism	23	25	32	44
Ling. assimilation	19	27	19	21
Ling. segmentation	25	22	22	23
Ling. marginality	33	26	26	12
Writing				
Bilingualism	10	9	14	19
Ling. assimilation	13	19	15	12
Ling. segmentation	25	19	24	39
Ling. marginality	53	53	47	29
N	490	268	222	295

Note: The proportions in % (rounded up/down in part), all add up to 100% per immigrant group across the four types of linguistic integration.

Source: SOEP, survey waves of 1984 and 1993; author's own calculations

Furthermore, the distribution across the four types based on age at migration reveals clear correlations (cf. Table 4.3, for the 1984 SOEP wave only).

Table 4.3: Linguistic integration and age at migration among immigrants in Germany (1984)

Age at Migration	up to 7	up to 14	up to 20	21+
Speaking				
Bilingualism	31	34	30	21
Ling. assimilation	58	39	14	9
Ling. segmentation	1	9	31	37
Ling. marginality	10	18	25	33
Writing				
Bilingualism	20	25	13	9
Ling. assimilation	55	31	7	4
Ling. segmentation	5	11	40	37
Ling. marginality	20	34	41	51
N	116	255	565	1515

Note: The proportions in % (rounded up/down in part), all add up to 100% per column across the four types of linguistic integration.

Source: SOEP, survey wave of 1984: author's own calculations

Linguistic segmentation and marginality *both* decline with decreasing age at migration. Correspondingly, there is a clear increase in the frequencies for L2 acquisition. However, the rate of the two sub-forms of L2 acquisition – monolingual assimilation and competent bilingualism – differs: the proportion of bilinguals only increases slowly with decreasing age at migration, whereas the proportion of linguistically assimilated immigrants increases correspondingly faster and also quite considerably in the 1984 wave, i.e. from 9 % to 58 % for speaking and from 4% to 55% for writing. The main reason for this is the abandonment or non-acquisition of the native language among younger immigrants. The result is similar for other waves of the SOEP survey (for more information on this point, cf. below).

Thus, in terms of language acquisition among immigrant guest workers, at least, the German situation corresponds completely with what has always been and continues to be observed elsewhere, for example in the USA: i.e. a clear language shift across the generations towards the language of the receiving country and away from the native language and thus, insofar as L2 acquisition occurs, to monolingual assimilation (cf. Lopez 1982a-d; Stevens 1985; Portes and Rumbaut 1996a: 214 ff., 217 f., 2001b: 127 f.; Alba, Logan, Lutz and Stults 2002: 471 ff.). In his analysis of the census micro file of 2000, Rumbaut (2004: 1193, Table 7 and 1196, Table 8), for example, finds a strong increase in English monolingualism parallel to the decrease in L1 proficiency over the course of the generations, which

is dependent above all on age at migration, and results from the combination of L2 acquisition and L1 abandonment. Therefore, because L2 acquisition occurs automatically, apart from a few exceptions, the language shift in the first language is the actual problem in the USA where bilingualism is concerned (cf. Portes and Rumbaut 1996a: 230 f.; Bean and Stevens 2003: 166 ff.). There is also a clear difference here between the different ethnic groups in terms of their “linguistic resilience”: the Spanish-speaking immigrants display a far more marked tendency to retain their L1 than their Asian counterparts and, correspondingly, the proportion of bilingual speakers in this group is greater when compared with the prevalence of monolingual assimilation (cf. Portes and Rumbaut 2001b: 127 ff. and 138 f.; and Alba, Logan, Lutz and Stults 2002: 473, Table 2). In a recent analysis of the data from the US census of the year 2000, Alba (2004) observes this phenomenon in relation to the course of monolingual assimilation not only for the language *use* within families, but also for the *language skills* themselves. The above-described difference between Latin-American and Asian immigrants is also found in this study (Alba 2004: 9 f., Table 1 and Figure 1).

Apparently, the Asian groups almost completely reproduce the pattern of language development familiar from the first three generations of immigrants to the USA from Europe: the first generation adopts just enough English as it needs to get by, but retains its native language, the second generation acquires fluency in English, almost without exception, but also largely retains the native language, mainly for use in the family context and in the third generation there is an extensive transition to monolingual assimilation. Alba, Logan, Lutz and Stults (2002: 473, Table 2; similarly Alba 2004) assess this, on the one hand, as confirmation of the continuation of the language shift away from the native languages to English, which had been repeatedly observed in previous studies, including under the conditions of the “new immigration”. On the other hand, the Latin American immigrants, and in particular the Mexicans among them, appear to follow this trend, if at all, at a slower rate (Alba, Logan, Lutz and Stults 2002: 480; also Alba 2004; cf. also below in connection with the multivariate results on language shift). The most important factors influencing this L1 retention among the Hispanic groups, would appear to be ethnic concentration and geographical proximity to the countries of origin, which is reinforced by some special constellations as found, for example in California or Florida, and – above all else – *intergroup* marriage (on this point, cf. below also in connection with the results from the multivariate analyses).

The pattern of L2 acquisition and L1 abandonment across the generations overall confirms the theoretical assumption presented in Chapter 4.1 that it is precisely those factors that promote L1 retention that often hinder L2 acquisition (and vice versa). However, the relation is not “logically” counteractive because combinations can also exist that foster both options, so that competent bilingualism may arise under favourable conditions, for example, timely access to learning opportunities in both language environments, the specific promotion of the native language, a high level of intelligence or the productive usability of both languages, e.g. in the context of transnational enterprises – *provided that* L2 proficiency already exists. A (too) advanced age at migration appears to largely eliminate this possibility as the necessary L2 acquisition cannot take place in this case. Furthermore,

based on the aforementioned empirical findings, a low age at migration and the possible contact with other language worlds enabled by it apparently hinders the acquisition and retention of L1 competence which is prerequisite to *bilingualism* (on this point, cf. the following multivariate analyses on L1 retention and L2 acquisition and on competent bilingualism; cf. also Chapter 4.3 on the critical period hypothesis).

Conditions of L1 retention

Earlier analyses of language shift or L1 retention were largely limited to the simple enumeration of language-use frequencies based on a comparison of years and immigrant groups (cf., for example, the studies by Lopez 1982a-d and Veltmann 1983) and relatively few studies can be found today which also report or enable multivariate analyses of the different effects. However, they do contain consistent evidence of the empirical effect of the specified conditions of L1 retention. The effects of *age at migration* and, in particular, of *interethnic marriage* were first documented by analyses of the Survey of Income and Education (SIE) of 1976 in the USA (cf. Bean and Stevens 2003: 165), and those of interethnic marriage were again consistently demonstrated by a more recent analysis of the USA microcensus (cf. Alba, Logan, Lutz and Stults 2002: 477 f.). These findings are repeatedly confirmed in the summaries of the mostly very isolated and dispersed results (cf. Portes and Rumbaut 1996a: 217 f., Bean and Stevens 2003: 166 f.). The studies by Lopez (1982a-d), in particular, demonstrated the significance of *ethnic concentration* and *group size* at an early stage. These effects were also repeatedly observed in subsequent studies (and recently, for example, by Linton 2004: 297 ff.). In addition to intra-group marriage, ethnic concentration appears to be one of the main causes of the identifiable *L1 resilience* of the Mexican immigrants (cf. Alba, Logan, Lutz and Stults 2002: 478 f.). In the case of the multivariate analyses, the direction of the influence of the different circumstances also coincides almost without exception with the theoretical expectations: i.e. the lower the age at migration, the lower the level of embeddedness into the ethnic context, the smaller and more dispersed the ethnic group is geographically, the more likely it is that the L1 will be abandoned – these observations are also applicable after controlling for the other factors. This is also confirmed by the re-analyses of the CILS and SOEP data (for details of the individual findings, cf. Chapter 4.2 in Esser 2006). This again applies for the effect of age at migration on L1 retention, in particular: the more advanced the age at migration, the stronger the tendency for L1 retention, or the more advanced the age at migration, the lower the tendency for L1 language shift. In addition to this, there are identifiable effects of the *L1 integration* into social relations (family language, L1 competence of the parents and of friends). However, in the case of the SOEP data, this is only applicable to the L1 writing skills. Remarkably, the use of *ethnic media* (newspaper and music) has also an effect, albeit a (significantly) negative one, on this, possibly because it hinders the acquisition of any writing skills (cf. also the findings on the negative influence of ethnic media consumption on L2 acquisition in Chapter 3.2).

The differences familiar between Latin-American and Asian children in the USA become also apparent in the CILS data: the L1 language shift is stronger among Asian children and significantly greater among all groups than among the reference category of Mexicans.

Based on the SOEP data, when the conditions of family and migration biography are taken into account, a *stronger* tendency for the *abandonment* of the native language is observed among Turks (!) as compared with all other nationalities of guest workers and, in particular, as compared with immigrants from Greece and the former Yugoslavia. This would indicate that the particularly strong focus on their native language among Turks, apparent from a (bivariate) perspective, is nothing more than a consequence of the specific everyday conditions that ensure native language retention, and this has evidently nothing to do with a particularly “Turkish” tendency to conserve their own culture.

It would appear that gender has no particular effect on L1 retention; the entirely negative signs that could indicate lower L1 proficiency among girls all emerge as insignificant.

Also particularly worthy of note is the *absence* of the effect of *education* on L1 retention in both databases. This is not entirely surprising as it was not possible to derive any clear (bridge) hypotheses for the effect of education on L1 retention (cf. Figure 4.1). Some studies exist which claim that the educational attainment (of parents) accelerates language shift (cf. for example Alba, Logan, Lutz and Stults 2002: 477 f.), while others indicate that educational attainment by parents is more likely to be accompanied by L1 retention, albeit in very specific situations. Thus, Nauck (2001: 167, 169) observes a *negative* correlation between the educational attainment of parents and L1 retention as the family language among immigrant guest workers in Germany (i.e. Italians, Greeks and Turks), but a *positive* correlation among the *Aussiedler* (i.e. ethnically German migrants) from Eastern European countries and among Russian immigrants in Israel (and then also for the pooled sample of all groups together). The tendency for retention of the L1 with increasing educational attainment is also found in a re-analysis of the PISA data, which also contains information on the family language, education and current professional status of the parents, but only when accompanied by low professional status, i.e. as a consequence of a clear inconsistency in status (for more detail on this point, cf. also Chapter 4.2 in Esser 2006).

► No consistent correlation between the educational attainment of immigrant parents and their children's native language proficiency

Thus, the re-analyses of the CILS and SOEP data also confirm the basically rather *opposite* development of L1 retention and L2 acquisition. *Both* skills are actually needed for bilingualism, whereas linguistic assimilation “only” requires the proficiency in the second language and if there are no further incentives or everyday opportunities for the retention of the native language, the development across the generations moves in the direction of monolingual assimilation. This effect is particularly prominent among the Asian immigrant groups in the USA.

Conditions of competent bilingualism

In terms of the explanation of competent bilingualism, attention must be paid to the perspective from which the relevant combination of skills is viewed. The starting point may be the non-mastery of the L2 (i.e. linguistic marginality and monolingual segmentation together). From here, it is possible to begin by considering two transitions in the acquisition

of linguistic competence: i.e. from L2 incompetence to monolingual assimilation or to competent bilingualism. A third possible transition may be added to this: i.e. from monolingual assimilation to competent bilingualism. Different influences may be expected for each transition as the transition from L2 incompetence to monolingual assimilation or to competent bilingualism depends on the acquisition of the *L2* and then again on the abandonment or retention of the *L1*. Due to the counteractive nature of the effects of the conditions, which may be expected in theory and are empirically observable, these specific features must be taken into account to avoid false conclusions. However, they were not always considered in the – few – analyses that have been published on the conditions leading to competent bilingualism, thus only the findings of the author's own correspondingly differentiating re-analyses (of the CILS and SOEP data) are reported below (on these technical details and the published – erroneous – findings, cf. also Chapter 4.2 in Esser 2006).

Insofar as it was actually possible to operationalize the variables on a comparative basis, the results of the re-analyses of the CILS and SOEP data on the conditions of the emergence of competent bilingualism are very similar: *age at migration* has the strongest effect for the transition from L2 incompetence to linguistic assimilation and to competent bilingualism and this is clearly due to the significance of age at migration for the necessary L2 acquisition. For similar reasons, *education* (in the family) has a significant influence on both linguistic assimilation and bilingualism. The deviations in the effects are based on the impact of the L1 embeddedness. As is entirely in accordance with the theoretical model, the opposite effects of L2 acquisition and L1 retention emerge here: i.e. the likelihood of transition from L2 incompetence to monolingual *assimilation* decreases with increasing *ethnic*

► **Conditions for second language acquisition and retention of the native language are often conflicting**

concentrations and with an *L1 family environment* and the likelihood of transition to *bilingualism* increases with the presence of *L1 friends*. Moreover, this occurs in each case for the same reason: under these conditions, L1 tends to be retained and this, in turn, results in the branching out into assimilation versus bilingualism. To this is added a clearly negative effect of *family cohesion* on linguistic assimilation: if the family pays attention to it, the L1 is not abandoned and instead of monolingual assimilation, competent bilingualism arises. The consideration of the third transition, i.e. from monolingual assimilation to competent bilingualism, makes the contrary effects resulting from the condition of L1 retention with completed L2 acquisition even clearer: an increasing age at migration boosts the tendency towards bilingualism as compared with monolingual assimilation because the L1 retention increases with age at migration. Similar processes may be observed for the effects of other variables. In this context, the clear reluctance of Asian children to complete the transition to bilingualism if they have already learned English, which has been observed on the basis of the CILS data, is particularly remarkable.

The rather tangled pattern of the conditions for the three transitions describes the empirically identifiable traces of a very complex process that unfolds in the background of L2 acquisition and – independently and in *addition* to – L1 retention. Competent bilingualism is apparently dependent on a very special combination of situations with regard to

family and migration biography: i.e. a low age at migration and high level of education (in the family), on the one hand, *and* the maintenance of intra-ethnic relations and family loyalties, on the other. This situation is probably more prevalent among ethnic elites with tightly knit networks, whose everyday situation actually makes both processes possible and in which *bilingualism* would tend to offer rather useful advantages. When compared, the patterns for the transitions to monolingual assimilation and competent bilingualism in the USA and in Germany emerge as very similar. However, it would appear that in the German situation the *acquisition of L2 proficiency* and the fact of remaining in a situation of linguistic segmentation or even linguistic marginality constitutes the obstacle which competent bilingualism fails to overcome, whereas, as opposed to this, in the USA and, in particular, among Asian immigrants there, the *abandonment of L1* and the immediate transition into linguistic assimilation is the problem and the reason why (competent) bilingualism is not achieved.

4.3 The debate on bilingualism

The explanation and consequences of bilingualism has been (and continues to be) surrounded by a certain level of debate and controversy. These generally centre on the *independent* causal relations, the assumption of supporting links or undermining interferences between L1 and L2 acquisition and the interaction with strongly limitative circumstances, such as age at migration. They should also be viewed in the context of, in part, strongly politicized debates surrounding language policy and certain educational measures, including, in particular, the concept of bilingual education (on the efficiency of bilingual education programmes, cf. also Chapter 5.3). For a long time, i.e. since the 1920s, the dominant view was that bilingualism had rather harmful consequences, especially for the cognitive development of children and their identity (on this debate, cf. *inter alia* Mouw and Xie 1999: 234 ff.; Portes and Rumbaut 2001b: 115 ff.). A series of studies appeared to provide evidence of such a “language handicap” among (newly immigrated) bilingual children. This view has, however, long been discredited. This change in attitude was prompted, in particular, by the study published by Peal and Lambert (1962). Entirely contrary to the previous studies, the latter found that bilingual children tended to have *better* cognitive skills than their monolingual counterparts (Peal and Lambert 1962: 10 ff., 21 f.). There was a simple reason why this result did not emerge earlier and, indeed, the opposite view prevailed: important background variables, such as the education and status of the parents, in particular, were not controlled for, and because the bilinguals were mostly newly immigrated children from the lower classes, it was possible for the misleading impression of a cognitive retardation due to bilingualism to emerge (cf. also the reasons stated in Chapter 1 for the selection of the studies considered in this AKI Research Review 4). The current view on the relationship between bilingualism and cognitive skills is that (competent) bilingual speakers tend to have *better* cognitive skills and *greater* powers of abstraction than monolingual speakers (after controlling for background factors). The question as to whether this is due to the acquisition of bilingualism itself, which allows to think in different cognitive worlds and identify abstracting bridges, or to the fact that only people

with particular cognitive skills achieve competent bilingualism, remains unexplained (on this point, cf. also Stromswold 2001).

Apart from focusing on the many specific problems concerning bilingualism, for example the best techniques for second language acquisition and second language teaching or the involved differences in certain forms of language and linguistic dimensions (cf. the current overview provided by Verhoeven 2003), subsequent debates mainly focus on two questions: the substantiation of the so-called *critical period hypothesis*, according to which for reasons of brain physiology the acquisition of (completely) competent bilingualism cannot be achieved after the advent of puberty, and the validity of the so-called *interdependence hypothesis*, according to which successful L2 acquisition, and hence also competent bilingualism, is only possible if certain L1 competences have already been acquired, and the L1 competences actually have a conducive effect on L2 acquisition.

The critical period hypothesis

In its most general form, the critical period hypothesis (CPH) states that even with sufficient access and appropriate motivation for the acquisition of perfect language proficiency, certain *age* limits exist in relation to the efficiency of acquisition, and this applies to both first and second language acquisition. The pioneering empirical contribution to the debate on the CPH was compiled by Johnson and Newport (1989; cf. also Newport 1990). According to this contribution, immigrants do not differ from natives up to an age at migration of between seven and ten years. After this age, there is a clear decline in the level of L2 proficiency achieved and, it would appear, this decline increases ever stronger up to the age of around 15 years. The discussions surrounding the CPH that followed this study focus on different variants of the interpretation of the findings of a large number of subsequently conducted studies (cf. the overviews provided by Long 1990, Birdsong 1999 and Scovel 2000). While the observable principle of “the younger the better” is rarely disputed, the claim of its universal applicability, (the exclusively) neurophysiological explanation and above all the hypothesis that from a certain learning age it is impossible to achieve a level of proficiency that is comparable with native skills, particularly in relation to accent-free speech.

Three positions can be identified here. The *first* position refers to the strongest variant of the CPH. It is based on the assumption of an initially easy and almost automatic phase of learning until the limit of the “critical” or “sensitive” period is reached. After this, the rate of learning declines (drastically) and learning no longer occurs automatically, but with the involvement of other cognitive activities. This does not exclude the possibility that considerable language skills can also be acquired at a more advanced learning age, but to achieve comparable results, motivation and access must become *increasingly* stronger. The most important (more recent) proponents of this version of the CPH are Long (1990), Patkowski (1980, 1990) and Scovel (2000).

The *second* position differs from the stronger version of the CPH particularly in that it acknowledges the negative correlation between L2 acquisition and learning age, but states that the (biological) age and resulting neurophysiological changes do not have any *causal*

effect. It also supports the view that there is no “critical” period followed by an abrupt decline in learning abilities, but that the decline is a gradual one. Based on this, other mechanisms are also named which could be responsible for the correlation, such as the general cognitive development and, in particular, the with advancing age ever stronger interfering interaction with the already acquired L1, and the influence of other factors, including linguistic structures themselves, such as linguistic distance, but also the lack of suitable learning environments for the older learners. Current proponents of this position include Flege (1999) and Bialystok and Hakuta (1999).

The *third* position also does not contest the observable correlation between learning age and the attainment of proficiency, at least for some dimensions of language acquisition. The concern here is to prove that, contrary to the view expressed by the “strong” version of the CPH, perfect L2 proficiency is also *possible* at an advanced age, even in an area as sensitive as the learning or abandonment of a special accent. Representatives of this third position, such as Birdsong (1999) and Bongaerts (1999) in particular, base their arguments on experiments carried out with special sub-populations, and the “proof” that perfect L2 acquisition is still “possible”, which merely requires the presentation of a single successful case.

The criticism of the strong version of the CPH also has something to do with a certain counter-criticism expressed by its proponents in response to its criticism. Another objection proposed in opposition to the CPH was that older L2 learners usually display a higher learning *speed* than younger L2 or L1 learners of a certain language (cf. evidence in Long 1990: 260 f.). This was responded to with the argument that what is important ultimately is not the speed at which the language is learned, but the *outcome* of a more or less lengthy learning process. This view has also been supported empirically: older learners learn faster than their younger counterparts, but even after a lengthy period of learning they almost never achieve the (average) level of the younger learners (on the debate surrounding the “ultimate attainment differences”, cf., in particular, Long 1990: 264 ff.).

► Second language acquisition easier up to puberty – after which greater effort and motivation are required

The very strict interpretation of the CPH, according to which even individual exceptions should not exist, would certainly be disproven through the presentation of individual cases of the achievement of perfect language proficiency at an advanced age. However, the very studies that demonstrate this confirm the exceptional nature of (perfect) L2 acquisition with increasing learning age: L2 perfection is by all means possible, but *only* if the entirely incontrovertible increasing difficulties associated with advancing age are compensated by *particularly* intensive, uninterrupted access which is also reinforced through targeted instruction and by a very high and enduring level of learning motivation (cf. the detailed account of the experiments in Bongaerts 1999). This also means that while it becomes increasingly difficult to attain complete L2 proficiency with advancing age, (almost) everything is still possible, even at a more advanced age at migration. This attainment necessitates a number of compensatory factors, however, in particular access to favourable conditions and to special measures such as language courses or teaching measures. Furthermore, no amount of favourable environmental factors and the best possible offers of access will achieve anything in the case of speakers with little motivation to learn the

language (on this point, cf. the findings on the effectiveness of state-ordained language courses in Chapter 3.2 above). Thus, the summaries of more recent overviews of the CPH debate are justified in stating that the current situation is characterized by an acceptance of a somewhat moderated form of the strong variant of the CPH and also represents the majority view of the researchers working in this area (cf., for example, Long 1990: 279 f.; Scovel 2000: 216).

The interdependence hypothesis

The interdependence hypothesis, as formulated and represented above all by Cummins (1981, 1984), basically states that the development in one language follows the development in the other. It is based on two partial assumptions that build on each other. Firstly, there are certain thresholds constructed by the comparatively retarded language which must firstly be overcome if progress is to be achieved in the other language – and in cognitive development in general – (“threshold hypothesis”). Secondly, if there is sufficient motivation and adequate access to the other language, the promotion of one language will lead to more rapid learning success in this other language. This is the actual assumption of the interdependence of the development of both languages through the *transfer* of the skills gained in the respective other language (“interdependence hypothesis”). Based on this, it would be expected empirically that not only do second language acquisition and native language skills correlate, but that the positive covariation of the language development persists even when certain third variables are controlled that could also give rise to this correlation, for example intelligence or a high level of motivation.

The interdependence hypothesis is based on observations of Finnish immigrant children in Sweden. Skutnabb-Kangas and Toukomaa (1976) found that the L2 acquisition among children with a more advanced age at migration, i.e. from around 10 years, and who had good level of L1 proficiency, made good progress whereas problems with L2 acquisition arose among *younger* children whose L1 development had stagnated with migration, (cf. the information on the development of the interdependence hypothesis *inter alia* in Verhoeven 1987: 15 ff., 76 ff.; Baur and Meder 1992: 112 f.; Siebert-Ott 1997: 458 ff.). Thus, the interdependence hypothesis plays (and played) a central role in the theoretical foundation of the different models of bilingual education which just start from the view that a complete “submersion” of immigrant children in the L2 in the classrooms without taking their native language skills into account can only be harmful, and that it is only with the – at least simultaneous – promotion of L1 skills that real progress can be expected in L2 acquisition and in other school subjects (cf. references in Gogolin, Neumann and Roth 2003: 45 ff. and Reich and Roth 2002: 17 ff.; cf. also Chapter 5.3).

Subsequently, attempts were made to test the interdependence hypothesis empirically in a series of studies (cf. overviews in Verhoeven 1987: 79 ff., 1994: 385 ff.). The findings are mixed: there are indications of its empirical soundness, usually by virtue of the fact that covariations between L1 and L2 skills are indeed observed, but also theoretical criticism of the hypothesis itself, methodological details of the studies, such as the samples and operationalizations and, in particular, the often unquestioning interpretation of observed covariations between L1 and L2 acquisition as proof of the existence of a *causal* relation.

The main objection concerns the possibility of a spurious correlation between the development of an L1 and an L2 through third variables that jointly affect it, i.e. above all intelligence, which is not further controlled in almost all of the empirical studies. To this is added the fact that only longitudinal studies are actually adequate for testing this.

One of the few longitudinal studies on the direct testing of the *causal* implications of the interdependence hypothesis is that carried out by Verhoeven (1994: 389 ff.) on language acquisition among 98 six-year-old Turkish children in the Netherlands. Here also, the results were at best mixed (Verhoeven 1994: 398, 401 ff.; on the controversy surrounding the validity of the interdependence hypothesis and references to other empirical studies, cf. *inter alia* Siebert-Ott 1997 and Baur and Meder 1992: 111 ff.). Verhoeven himself relativizes the few results from his study which are most likely to support the interdependence hypothesis, by referring to the possible influences of unquantified third variables, such as certain social characteristics of the children and their families or access to learning environments for the two languages (Verhoeven 1994: 408). In any case, the interdependence hypothesis cannot be viewed as having been truly tested unless these other possible influences on L2 acquisition are not included (according to Verhoeven 1994: 411 in his conclusion), not even if the measurements are time-related and the bivariate covariations found between L1 and L2 skills are relatively strong (on an at best equally weak substantiation of the interdependence hypothesis based on a multivariate re-analysis of the CILS data, cf. Chapter 4.3 in Esser 2006).

► No consistent evidence has yet been provided in support of the interdependence hypothesis

In summary, as regards the two controversies discussed above it is possible to state that there is no indication whatever that bilingualism is harmful to the cognitive and emotional development of (immigrant) children. It has not yet been definitively demonstrated whether age-related neurophysiological limits to language acquisition actually exist, however it has been shown that there is a clear increase in the requirements concerning the general learning conditions, in particular in relation to access and motivation, if comparable skills are to be achieved at a more advanced age. Also, the evidence in support of the interdependence hypothesis, which constitutes the basis for the bilingual education programmes, is at best weak, and the problem as to whether unquantified background variables, such as intelligence in particular, could account for the observed (weak) effects still exists.

5. Language and School Performance

Education constitutes the central link between the language skills and structural integration of immigrants (on the labour market). The generally poorer educational situation of immigrant children as compared with native children in the various receiving countries is one of the most stable findings to emerge from the international research on the problem of ethnic stratification (cf. overviews and references in Kao and Thompson 2003 or Phillips and Chin 2004). This is also applicable to the situation in the Federal Republic of Germany (cf. in particular Nauck and Diefenbach 1997; Karakaşoğlu-Aydin 2001; Diefenbach 2004a; Kristen and Granato 2004: 123; Diefenbach 2004b: 227 ff.; or Kristen 2005: 13 f.). Although this report does not deal directly with the conditions for educational success of immigrants (or immigrant children), solely because – in addition to the linguistic aspect – a series of additional processes would have to be taken into account, such as preschool integration, school choice or distribution of immigrant children between schools and migration into the relevant neighbourhood, the educational expectations and decisions of the parents and their reaction to failure, the grading behaviour of teachers and possible institutional or other discrimination in the schools, it does, however, explore the aspects of the educational problems of immigrant children which concern the link between school performance and language skills.

The reason for the special consideration of the relations between language and educational success is obvious: school performance is directly and indirectly connected with language skills, first and foremost because the teaching language is usually that of the receiving country and many tasks are also embedded in a linguistic context, or are at least related to a cultural context closely associated with the language and previous cultural knowledge (on this point, cf. Chapter 2). Despite the existence of an almost excessive abundance of, in particular, small and punctual studies on the school situation of immigrant children, systematic empirical studies on the relation between language, school performance and educational success are still largely lacking because the language skills have scarcely been recorded at all or the relevant background variables have not been controlled. One of the few convincing analyses of this relation was that carried out by Alba, Handl and Müller (1994), which demonstrated a very strong effect of the language skills of the *parents* on the educational success of the children. The significance of the language and, more generally, the cultural background at home for the acquisition of language skills by and educational success of the children was also observed here and there in subsequent analyses, including analyses of the SOEP data (cf., for example, Nauck and Diefenbach 1997 or Nauck, Diefenbach and Petri 1998: 493 f.; Baur 2000; Helmke and Reich 2001; Diefenbach 2002: 56 ff.; Bleakley and Chin 2002: 16 ff., 2004a: 17 ff.; Siebert-Ott 2003), although on the basis of corresponding empirical studies that take all of the relevant circumstances into account simultaneously, it did not always become clear whether other factors such as language-determined self-confidence in one's own capabilities, institutional discrimination or certain contextual characteristics of the schools are, in fact, more relevant (cf., for example, Müller 1996: 48, Figure 4 or Diefenbach 2004b: 243).

Three specific questions arise here: What explains the differences in language-related school performance and the associated general educational success? What significance do bilingual skills have for school success? And what effects do bilingual education programmes have on language acquisition and school performance?

5.1 Language performance and school success

School performance in *language*-related areas, such as reading, and, based on this, in other areas, and educational career in general constitute a special case within the problem of L2 acquisition. Because few usable published findings are available on the relation between language and school performance, parts of the report on this topic are based on the re-analyses of other studies, in particular of the CILS data and the (German) PISA 2000 study which recorded, at least in part, the school performance and family and migration circumstances of immigrant children of around 15 years of age (further details on this can be found in Chapter 5.1 in Esser 2006).

Language-related school performance

The analysis of the CILS database confirms almost without exception the assumptions of the theoretical model of L2 acquisition with regard to *language-related school performance* and the correlations established hitherto for the general case of L2 acquisition: age at migration again displays a clear effect here and this in particular – again in line with the critical period hypothesis – after a certain age threshold. It should of course be noted here that due to the fixed age of the children during data collection (15 years) the effects are also confounded with those of duration of stay and therefore the effects tend to be inflated. The L2 skills of the parents hardly promote the reading performance of the children and are as minimal in their effect as the (L1) language used in the family context (on a daily basis). As opposed to this, if the children communicate with, in particular, their parents in the language of their country of origin, this has a strongly negative effect on their reading performance at school. Like the rather negative effect of family cohesion and the language used in the circle of friends, this contradicts by all means the fairly frequently proposed hypothesis whereby ethnic resources, in this case L1 usage in the interaction with the parents, are supposed to exert an independent performance-enhancing influence (cf., for example, Zhou and Bankston 1994; Bankston and Zhou 1995; Rumbaut 1994; Portes and Hao 1998). With regard to school contexts, only the proportion of lower class children in the schools has an effect and that in the sense of a deterioration in the reading performance (on this point, cf. also below in the context of the effects of ethnic concentration). As opposed to this, as would be expected in accordance with the interdependence hypothesis (cf. Chapter 4.3), the everyday (and subjectively measured) language skills in the L1 have *no* independent influence on reading performance. In contrast and unsurprisingly, the (everyday) L2 skills have a very strong independent effect on reading performance at school. A similarly consistent confirmation of the generally observed pattern also emerges on the basis of the PISA data: the use of the native language in the family context has a (clearly) negative effect; in what amounts to a marked critical-period turning point, an advanced age at

migration, i.e. from around 12 years of age, hinders L2 acquisition; a higher learning age for language – polled independently of age at migration – has an independent negative effect; and all variables which are associated with social position and the educational background of the parents – i.e. educational attainment, professional status and cultural capital operationalized through the number of books in the household – have an additional and again particularly strong effect on school performance in language-related areas.

Of course, school performance in language-related areas (based on the analysis of the data from the PISA study) differs according to educational level or type of school involved (*Hauptschule*, i.e. a basic second-level school which takes German students through the last five years of compulsory education, *integrierte Gesamtschule*, i.e. comprehensive second-level school, *Realschule*, i.e. second-level school leading to an intermediate qualification, similar to the American junior high school, *Gymnasium*, i.e. academic second-level school, similar to the British grammar school/American high school), although it must remain open as to which outcomes are due to a selectivity effect based on existing language skills and which are due to an independent socialization effect of the different educational contexts. In terms of the effects of the family and migration biography variables *within* the (four) *educational levels*, it is possible to specify three consistently stable relations. Firstly: Turkish children in Germany emerge as disadvantaged in their reading performance on all four educational levels, even when controlling for all background variables – this is particularly evident at *Gymnasium* level, but can also be observed in the basic second-level schools, i.e. *Hauptschule*. As opposed to this, the *Gesamtschule* and *Realschule* school types appear to offer a comparatively more favourable environment for this group. Secondly: a more advanced age at migration generally gives rise to – sometimes enormous – disadvantages on all four educational levels. In the case of the apparently particularly talented students who manage to reach grammar/high school level, it is only a *very* advanced age at migration (i.e. in excess of 12 years) that proves disadvantageous, and the disadvantage at this point is considerable. Thirdly: in all cases, reading performance at school emerged as dependent on the socio-economic position of the parents and, in particular, on the cultural capital. However, learning age loses its effect within the different educational levels and is probably therefore only of background significance in the context of the distribution of pupils between the school types. In contrast, the socio-economic position of the family is again an important factor for success at the higher educational levels.

► Family communication in the language of origin and an advanced age at migration are often accompanied by poor reading skills in German

The analysis of the CILS data reveals the persistence of certain *ethnic differences* in language performance, even after the control of background factors, in particular certain advantages that Asian immigrants have over their Hispanic counterparts which cannot be explained in a straightforward way. According to the PISA data, in Germany, the ethnic disadvantages in language performance largely disappear as compared with the performance of German students when the family and migration-biography backgrounds are controlled for. However, this does not apply to the Turks. Typically different mechanisms appear to play a role in educational success here for the different immigrant groups. The disadvantages faced by the so-called “Aussiedlerkinder” (ethnically German immigrant children) are

mainly associated with their relatively high age of arrival, while those of the children of guest workers, and particularly those of the Turks, are mainly associated with the educational attainment, status and cultural capital of the parents.

Thus, overall, the re-analyses of the CILS data and the PISA study confirm all of the previous theoretical hypotheses and empirical findings on L2 acquisition in general (from Chapter 3), including those relating to (*objectively* measured) L2 reading performance at school. In contrast, there is no tangible support for the assumptions that native language skills and practices in the family promote L2 acquisition and school reading performance in a particular way (on this point, cf. Chapters 5.2 and 5.3 below).

Ethnic concentration

In terms of the (language-related) school performance of immigrant children, in addition to the general conditions of (linguistic) social integration, certain *contextual* characteristics of the *schools* and *classrooms* also become important. Clear indicators with regard to such context effects have been available for some time now, at the latest since the publication of the Coleman Report in the 1960s. In particular, the *average* socio-economic status of the parents of the children in the classrooms appears to have such an effect. The way this works is that higher concentrations of children from low-status family backgrounds gives rise to *overall* poorer school performance than average or lower concentrations, even irrespective of the effect of individual characteristics, such as, in particular, the *individual* social status (cf. overviews and references in Caldas and Bankston 1997: 269 ff.; Bankston and Caldas 1996: 537 ff.; Portes and MacLeod 1996: 256 ff.; Portes and Hao 2004: 11920 ff.; Stanat 2006: 194 ff.). The mechanisms that are held responsible for this effect include the differences in the quality of teachers, the equipment of schools, the expectations of the teachers, stereotyping (“stereotype vulnerability”) and – generally – the intellectual climate which are all associated with these ethnic concentrations. They influence the performance of *all* students as a “common fate” and, moreover, *in addition to* the other (individual) variables that determine their school performance. According to the model of language

► A higher proportion of non-native speakers in classes impedes additionally the acquisition of skills

acquisition a negative correlation may be expected between the concentration of low-status pupils or ethnic concentration and school (reading) performance, which is analogous to what applies to L2 acquisition in general (c.f. also the findings on the effect of ethnic concentration in

the living environment presented in Chapter 3.2): i.e. the access to the L2 environment varies with the distribution of the pupils according to status or their language skills and cultural practices between the schools and classrooms, and the varying intellectual climate generated by the status distribution and the resulting variation in the quality of the teaching influence both the motivation and efficiency of the learning of the (second) language and (through this) the performance in other school subjects.

Studies that deal specifically with the effects of ethno-linguistic concentrations in schools on the (language-related) school performance of immigrant children are rare. The most important studies were carried out by Portes and Rumbaut (2001) as part of their analysis of the CILS data, and by Kristen (2002), Portes and Hao (2004) and Stanat (2006) in their

analyses of the PISA data. In terms of the effect of the ethno-linguistic composition of the schools or classrooms on (language-related) school performance, all of these studies report, partly very clear, *negative* effects in addition to all of the other influences. Moreover, Stanat (2006) finds that the context effects only arise when a certain threshold has been exceeded in relation to the ethnical composition of the schools, i.e. over 40 percent of children with the L1 as family language in the schools.

With all such findings, the question remains as to what it is precisely about the ethno-linguistic concentration in the schools that hinders learning success, e.g. the quality of teaching, the equipment with resources, teacher expectations or the intellectual climate, which all vary with ethno-linguistic concentration. The simplest interpretation of the effect of ethno-linguistic concentrations on L2 language acquisition is that it gives rise to an increasing unlikelihood of the availability of the (interactive) access necessary for language learning. In her interpretation of this effect, Stanat attempts to identify the mechanisms by operationalizing the compositions of the schools in two different ways: i.e. firstly, based on the mean of the parents' status, which could constitute an indicator of the motivation, incentive and resource potentials conveyed from the home situation to the school, and, secondly, based on the mean of the so-called basic cognitive skills of the children. The empirical result is, that once the children's average cognitive skills are controlled for, *all* of the context effects of the ethno-linguistic composition disappear and the influence initially exerted by the average status of the parents is also forfeited. This result appears to indicate that (language-related) school performance proceeds (at least also) through mechanisms other than linguistic access (on this point, cf. also the findings in Bankston and Caldas 1996 and Caldas and Bankston 1997). Based on this, it would appear that the effect is generated not so much by the access to the L2 associated with the ethno-linguistic composition than by the intellectual climate which is measured in terms of the average basic cognitive skills. However, the basic "cognitive" skills recorded in the PISA 2000 study do not measure "intelligence" but previous cultural knowledge. This, in turn is strongly linked with L2 skills and ethno-linguistic composition of the schools, so that the identified context effects are after all again connected to the cultural homogeneity or heterogeneity of the schools and classrooms (for more detail on this, cf. Chapter 5.1 in Esser 2006).

In addition to this, some (few) studies also provide evidence of a clear *interaction effect* between the individual characteristics that promote school performance and the context features of the schools or classrooms. Based on this, the effects of individual advantages, in particular those arising from a higher status of the parents, are *reinforced* in higher-status schools or classrooms, whereas the effect of the individual status diminishes in case of a lower average status of the school or class (cf. Portes and Hao 2004: 11924, Figure 1; Portes and MacLeod 1996: 268 f.). The interaction effect between individual status and the average status of the school on school performance (including language-related performance) corresponds precisely to that already generally observed for the correlation between ethnic concentration in the living environment and individual variables such as duration of stay, education and age at migration on language acquisition in general (for a detailed account of this, cf. Chapter 3.3).

► Ethnic concentrations in school classes reinforce other unfavourable conditions

Correspondingly, the substantial consequences are the same in this case as they are in the latter: low-status children are particularly affected by a deterioration in the school situation in terms of a concentration of low-status children or children whose level of performance is poor. Conversely, children with higher status cannot bring their family advantages to bear in schools with higher concentrations of low-status children to the same extent that they can when they attend schools with high concentrations of children from similar backgrounds. This may be applied *mutatis mutandis* to the ethnic concentrations in schools or classrooms. Thus, there are two sides to all policies involving the de-segregation of schools, which Caldas and Bankston summarize as follows:

“Our results suggest that if a young person from a disadvantaged socio-economic background, has parents with *low* social status, and belongs to a *minority race*, then *diversity* would be an *advantage*. The student would benefit from the resources that the more advantaged students would bring to the social context of the school. On the other hand, our findings indicate that if a young person comes from a relatively *privileged* background, then *diversity* could be a *disadvantage*, at least in terms of academic achievement.” (Caldas and Bankston 1997: 276; italics added by the author of this report)

Almost everything points to the fact that the ethno-linguistic concentrations or the usually clearly co-varying concentrations of low-status children (and the associated effects on the learning climate and learning efficiency) constitute one of the central causes of the ethnic differences in (language-related) school performance and that creating a corresponding mix of pupils in schools and classrooms would represent an important contribution to the resolution of this problem (while also taking possible threshold values based, for example, on the results of the PISA study into account). The question as to whether this would compensate for the apparently associated (relative) disadvantages for the privileged children, who would thereby relinquish the opportunity to achieve certain *absolute* performance levels and thus not only forfeit a relative advantage, remains open. These ambivalences in the effects of stronger ethno-linguistic mixes in schools and classrooms, which are demonstrated beyond doubt by the empirical findings and theoretical explanation of (language) learning, are not, however, supported by the political enforceability of measures for the desegregation of schools and classrooms.

School performance in other areas and educational success

The pattern of the influences on language-related school performance remains the same when the other elements of school performance, in particular that in mathematics, and overall educational career are considered. Particularly worthy of note is the fact that it emerges from the CILS data that Asian children perform clearly better than their Hispanic counterparts, and that the ethnic differences remain when it comes to performance in mathematics, even when the background variables are controlled for (however no reference is made to the performance of non-immigrant children). Of the factors from the family and migration biography backgrounds, only educational aspiration, the language used by the parents to communicate (parental L1) and the proportion of lower-class pupils in the school have an influence, however this influence is considerable in each case. As was the case with the PISA data, the reading performance measured in the tests naturally has a very strong influence on performance in mathematics. Against this background, the complete

disappearance of the effects of age at migration on performance in mathematics is very instructive. It may be assumed that these effects are all conveyed through the language performance which is, of course, strongly affected by age at migration. The established correlations for performance in the sciences are similar for both studies (i.e. CILS and PISA), whereby the differences, for example in terms of the effects of nationality, are located “midway” between the reading and mathematics performances. This is due to the fact that both types of skills are required in the completion of the associated tasks, i.e. linguistic *and* logical-abstraction skills.

Finally, again, a very analogous pattern emerges in the effects found (in the PISA data) for the general *educational career* of the children. In terms of access to the *Realschule* (i.e. secondary/junior high school) and the *Gymnasium* (i.e. grammar/high school) – as compared with remaining at the basic second-level school (i.e. *Hauptschule*) – the first thing to emerge is the clearly very precarious situation of Turkish pupils when their specific circumstances, in particular the family environment, are not taken into account: as compared with the German reference group, they only have a 15-per-cent chance of achieving the transition from the *Hauptschule* to the *Realschule* and this falls to only 10 per cent for the transition to the *Gymnasium*. When the migration and family biography circumstances are taken into account, however, the ethnic disadvantages for all groups disappear almost completely. At this point, only the Turkish children are at a significant disadvantage in terms of attendance at the *Realschule*, however they are *no longer* at a disadvantage in terms of attendance at the *Gymnasium*. As opposed to this, massive *advantages* have now emerged for ethnically German immigrants (always as compared with German pupils). This is the effect of the relatively high closeness to education of the ethnically German families and an obviously additional educational motivation. It is comparable with a state of affairs that is in no way unusual and may even represent the norm among better situated and “individualized” immigrants and is also observed, for example, among Asian immigrants in the USA.

Thus, in general, language-related school performance in the strict sense as well as school performance in the other non-linguistic subjects conveyed by language-related performance, such as mathematics and the sciences, and the overall educational career of immigrant children follow in all the same pattern as the one observed for the L2 acquisition of (adult) immigrants in general. The *age at migration*, the *closeness to education of the parents* and, as a context characteristic, the *ethnic concentrations* in schools or classrooms are of particular relevance here. Moreover, the great similarity between the patterns of educational transition and the conditions of non-language-related school performance and the already investigated processes involved in direct and indirect language-related performance reinforces the assumption that, like the entire educational career, school performance is very closely related to language acquisition in immigrant families and the *linguistic interaction at family level*. Indeed, they apparently form a combined syndrome of probably endogenous and, possibly therefore, cumulative reinforcing and undermining influences which are again aggravated by the effects of the ethnic concentrations in the living environment and in the schools and classrooms.

Of course, the without doubt provable and clear influences of the circumstances of the family and migration biography and the evident relevance of ethnic concentrations in the schools and classrooms – also in their interaction – do not exclude the possibility that there are other factors at play in the generation of ethnic educational inequalities, such as binding educational decisions at an too early stage of the school career and the resulting specific impermeabilities, the effects of the behaviour of teachers and (institutional) discriminations in the schools. Based on everything that is emerging, such processes are *additional* to the mechanisms identified here, and in view of the empirical evidence available from very different sources, it is very unlikely that even if these processes actually exist, the circumstances of the family and migration biographies and the ethnic concentrations in the schools would become less important for the educational success of immigrant children. Studies which systematically correlate the different influences and would enable the assessment of the relative effect sizes of conditions of the family and migration biography, the ethnic concentrations in the schools and classrooms and the institutional and organizational processes in the schools themselves have yet to be carried out.

5.2 Bilingualism and school performance

In terms of school performance, in the more recent literature on the educational success of immigrant (children) in particular, the hypotheses is presented that (competent) bilingualism has an independent *positive* effect beyond the acquisition of the L2 through the effect of the maintenance and use of the *native* language., Moreover, programmes for bilingual education and the (also political) demands for the institutionalized promotion of the languages of ethnic minorities are based on these assumptions (on this point, cf. also Chapter 5.3), although other motives could also be involved here, such as societal recognition of the immigrant languages.

Two special mechanisms and perspectives used in the explanation of the relation between L1 mastery and school performance are specified for the substantiation of the performance-enhancing effect of bilingualism: i.e. the cognitive and cultural perspectives (for a summary of both perspectives, cf. Mouw and Xie 1999: 233 ff.). The *cognitive* perspective largely corresponds to the arguments of the interdependence hypothesis discussed in Chapter 4.3, in particular as presented by Cummins (1981, 1984). According to this there is a transfer of L1 skills to L2 acquisition and to other cognitive performances. The *cultural* perspective focuses on the *communicative* consequences of bilingualism and the resulting *social* consequences, in particular the transfer of the (achievement) values of parents to the children, the maintenance of family social control for the monitoring of their contacts and, in particular, the support of the native (ethnic) identity and self-image, all of which have a positive effect on school performance (cf. for example Portes and Rumbaut 2001a: 247 ff.). Empirically, reference is made in this context to the notable successes of the Asian and Indian immigrants in the USA which can be explained, in particular, by the fact that the families kept their children away from the (assimilative) inner-city ghettos and that continuous communication is part of the ethnic social capital that generates this effect (cf. *inter alia* Zhou and Bankston 1994; Bankston and Zhou 1995; Rumbaut 1994; Portes and

Hao 1998). As is the case with the criticism made of the evidence presented in favour of the interdependence hypothesis, the objection against these observations is raised that the findings were established without control of the relevant background characteristics (cf. Mouw and Xie 1999: 237) and that there is a much higher rate of inter-group marriage among the Asian groups than any others, in particular the Hispanic groups, among whom significantly lower school performances are observed. Thus, it would appear that ethnic capital alone and in general, i.e. irrespective of the content of this capital, such as value orientations towards education, learning and achievement could not be solely accountable for this effect (Mouw and Xie 1999: 237 f.).

Both perspectives work on the assumption that competent bilingualism has an *independent* positive effect and, indeed, *above and beyond* the effects of L2 mastery and the other backgrounds of the family and migration biography. If only one of the two assumed mechanisms, i.e. the cognitive and/or cultural, has an effect that goes into the supposed direction, it should be possible to demonstrate it as an *additional* positive effect of competent bilingualism on school performance as compared with mere monolingual assimilation (with the control of the relevant background variables). Unlike the PISA study, which does not contain any direct measurement of L1 skills, the data from the CILS project can be used to establish whether or not competent bilingualism pays off with regard to school performance as compared with monolingual assimilation (or L2 acquisition in general as discussed in Chapter 3.2). Table 5.1 presents the results of a corresponding analysis of the CILS data on the effect of the different language types on language-related school performance with a stepwise control of the background variables.

Table 5.1: The effect of competent bilingualism on reading performance in the second language

	Model 1	Model 2	Model 3	Model 4
Variables	bivariate: types of linguistic integration	like model 1 & gender/ nationality	like model 2 & age at migration/ family education	like model 3 & ethnic context/school
OLS coefficients				
Bilingualism	-9	-2	0	0
linguistic assimilation	---	---	---	---
linguistic segmentation	-41	-33	-23	-22
linguistic marginality	-29	-26	-20	-19
R ²	0.10	0.13	0.14	0.27
N	3271	3271	2625*	1032**

Note: (OLS) coefficients in four linear regression models; reference category: monolingual assimilation; significant results highlighted in bold; * reduced case numbers due to the inclusion of data on the family; ** reduced case numbers due to the inclusion of data on the parents

Source: CILS: author's own calculations

The reference category is monolingual assimilation. The bivariate analysis (model 1 in Table 5.1) reveals an unsurprising and overall advantage of English proficiency and the fact that bilingualism tends to be disadvantageous as compared with monolingual assimilation. When gender and nationality are taken into account, there is already almost no further difference between monolingual assimilation and competent bilingualism in terms of the effect on school performance, and all that would appear to matter is proficiency in English (model 2). When migration and family backgrounds (model 3) and, finally, also the ethnic and school contexts (model 4) are controlled for, the difference is further reduced and

► School performance is not enhanced by proficiency in the language of the country of origin in addition to that of the host country

ultimately disappears entirely. What remains are clear effects of language skills, but *only* in relation to the effects of proficiency in the *second* language, i.e. irrespective of whether it exists in the context of monolingualism or bilingualism, and, finally, no

particular differences emerge between linguistic marginality and monolingual segmentation. The dividing line clearly runs along the L2 skills. It would appear that everything else, including the possible loss of the native language and linguistic marginality, is irrelevant. The results for mathematical performance are ultimately very similar: all that really counts is English, although, not surprisingly, the effects of language skills are weaker here than in the case of reading performance.

As opposed to this, in their analysis of school performance using the same data from the CILS study, and with the control of the relevant variables, in particular the influence of the relevant countries of origin, Portes and Rumbaut (2001a: 240, Table 9.2) find that competent bilingualism has significant positive effects. They interpret this as an indicator of the significance of the ethnic resources (Portes and Rumbaut 2001a: 243). It should be noted, however, that Portes and Rumbaut operationalize the language types dichotomously: i.e. everyone who speaks both languages is classified as “fluent bilingual” and the reference category is all others, i.e. including those with no knowledge of English. However, the influences of L2 acquisition, on the one hand, and the additional effect of L1 retention, on the other, must be separated in the analysis of the specific effects of competent bilingualism. Thus, Portes and Rumbaut’s findings on the performance-enhancing effect of bilingualism are an artefact of their specific and inadequate operationalization. At most, all that can be established is that with the increasing group size of the relevant ethnic community, certain disadvantages (at school and on the labour market; cf. also Chapter 6.2) can be compensated by bilingual skills. This is applicable, for example, in the case of Latin American immigrant children who (based on further re-analyses of the CILS data) enjoy certain advantages arising from bilingualism as compared with their Asian counterparts, but from a clearly lower performance level. In contrast, in the case of the (considerably more successful) Asian children, as compared with monolingual assimilation, bilingualism is *detrimental* in its effect.

Based on this, neither the (purely) cognitive perspective of the assumption of a generally favourable effect of bilingualism, nor the (purely) cultural perspective of the generally positive significance of ethnic resources appears to be tenable in terms of school (and other) performance. Obviously, special *conditions* exist, under which the retention of the

native language or bilingualism can aid school (and other) performance or not. The hypothesis of the merely *conditional* effect of bilingualism on school success has been presented by Mouw and Xie (1999), in particular. They start from the part of the cultural perspective that focuses on the family control of the school performance of the children through unbroken effective communication between children and parents as one of the mechanisms of the effect of ethnic resources, of which the native language is a central component. In contrast to the cultural (and also cognitive) perspective, this positive effect of bilingualism is only assumed for the parents and only as long as they themselves do not speak the second language. Thus, the mechanism is not the (native) language in itself, but the family control of the children which it enables in certain circumstances. Therefore, the effect of the bilingualism is merely “transitional” and depends on the condition of the parents not speaking the *second* language. Mouw and Xie (1999: 246 ff.) present empirical findings which appear to confirm this hypothesis.

In subsequent attempts by Portes and Hao (2002) to replicate this effect using the CILS data, it was not possible, however, to find the interaction effect of the transitional perspective. Similarly, further re-analyses of the CILS data involving the separate analysis of the Hispanic and Asian children did not produce any repetition of the findings of Mouw and Xie. Nevertheless, it is possible to conclude from all of the results on the then three perspectives on the particular effect of bilingualism that competent bilingualism obviously does not have *any* systematic and, in particular, no “unconditional” and causally independent effects on school performance above and beyond the monolingual mastery of the second language. This also applies irrespective of whether the retention of the native language – and hence competent bilingualism, – has other positive consequences, for example in terms of self-image, the stability of relations in the immigrant families (on this point, cf. for example Portes and Rumbaut 1996, 2001; Portes and Hao 1998) or the avoidance of assimilation to the “wrong” segment of the host society through the linguistically-imposed familial social control. The empirical evidence for the assumption that bilingual skills have a positive effect on the social and psychological well-being of immigrants (children) which goes beyond the effects of second language competence is also extremely scarce, and what emerges instead is that it is rather the (linguistic) *assimilation* which achieves what is sometimes ascribed to the retention of the native language or bilingualism and to multiculturalism and integration in general (for a more recent view of this, cf. Vedder 2005: 408-414): *greater* self-esteem and *fewer* psychological problems.

5.3 Effects of bilingual education

For some time now, in addition to more politically motivated considerations, the multilingual organization of teaching with a special promotion of the relevant native language(s) has been proposed with a view to resolving the problems associated with cultural and linguistic pluralization in the schools and alleviating the disadvantages faced by immigrant children with low levels of proficiency in the relevant L2. Instead of simple “submersion” in normal teaching in the L2 based on the “sink-or-swim” principle, the idea is to provide “immersion” with – more or less – clear proportions of the classrooms being multi-lingual,

although the programmes differ with regard to how long and how exclusive the teaching in the first language should be and whether the other pupils are included in it or not (cf. for an overview of the different variants of the programmes, for example Cummins 2003: 3 ff.; Slavin and Cheung 2003: 2 ff., 2005: 7 ff.; Söhn 2005: 14 ff.). These measures – which are complex in organizational terms and associated with multiple preconditions – are theoretically justified using assumptions from the interdependence hypotheses of an interactive definition of L1 and L2 acquisition (cf. in particular the expertises by Reich and Roth 2002: 18 ff.; Gogolin, Neumann and Roth 2003: 38 ff. or references in Slavin and Cheung 2005: 6 f.; cf. also Chapter 4.3). The question then arises as to whether these measures have in fact the theoretically assumed and practically expected success. The clarification of this question becomes even more urgent in view of the fact that, just like in the case of the proposals for separate language and integration courses for adult immigrants in Germany, these (and similar) concepts play a prominent role in the various statements and resolutions on the reorganization of immigration and on integration measures (cf. Unabhängige Kommission “Zuwanderung” 2001: 216 f.; Sachverständigenrat für Zuwanderung und Integration 2004: 259 f., 268 ff.). While attention is repeatedly drawn to the fact that the positive effects are conditional on the fulfilment of certain conditions, such as the nature of the models, a certain minimum duration, the training of teachers and the quality and consistency of the implementation, no doubt is expressed as to whether a promoting effect really exists which could justify the increased costs of implementing such measures (cf. Cummins 2003: 12 ff.; Gogolin, Neumann and Roth 2003: 45 f.; Reich and Roth 2002: 18 ff.).

The assumptions regarding the clear and undoubtedly positive effects of bilingual education are generally justified on the basis of a few central evaluation studies, for example by Ramírez et al (1991a, b, c) and, in particular, by Thomas and Collier (1997, 2002), as well as by the findings of some meta-analyses which are now also available, in particular that undertaken by Greene (1998). Greene’s meta-analysis was conceived as a critical evaluation of a previous meta-analysis by Rossell and Baker (1996). The study by Rossell and Baker was, in turn, a reaction to earlier synopses and meta-analyses, from which it had not been possible to draw consistent conclusions (on this history, cf. current summary in Rossell and Kuder 2005: 43-46 or in Slavin and Cheung 2005: 14 f.; on this debate, cf. also Reich and Roth 2002: 19). The analysis by Rossell and Baker is based on a selection of 72 studies which are methodologically acceptable from their point of view out of an original group of around 300 (on the selection criteria used, cf. Rossell and Baker 1996: 13 ff.). Rossell and Baker’s (1996: 19) general conclusion was that “... there is as yet ... no consistent research support for transitional bilingual education as a superior instructional practice for improving the English language achievement of limited English proficient children.”

According to Greene, the main criticism of the study by Rossell and Baker was the determination of the effect size simply by identifying the presence or absence of an effect, but without taking their respective size into account. For this reason, Greene carries out his analysis by attempting to quantify the effect sizes using now established conventions for the conduct of meta-analyses. He applies significantly more rigid criteria than Rossell and Baker in his selection of methodologically acceptable studies and of the 72 studies

considered by Rossell and Baker, only *eleven* qualified for inclusion in his analysis. Only two of the eleven studies show significant differences between the experimental and control group, all of the other effects observed are not significant and almost no effects can be found in six studies. Overall, however, there appears to be a positive effect: “Despite the relatively small number of studies, the strength and consistency of these results, especially from the highest quality randomized experiments, increases confidence in the conclusion that bilingual programs are effective at increasing standardized test scores measured in English.” (Greene 1998: 7)

Following this widely recognized study by Greene, which has been repeatedly cited as evidence of the efficacy of bilingual education, another particularly elaborate meta-analysis was carried out by Slavin and Cheung 2003 (cf. also the summary in Söhn 2005: 55-60). The latter accuse Greene of being too restrictive in the selection of studies in many cases and include again more studies in their analysis. Slavin and Cheung refer to their approach as “best-evidence-synthesis” (2005: 6) because they also attempt to reconstruct incompletely reported effect sizes and also use verbal presentations and “qualitative” information to establish the significance of the effect sizes. Slavin and Cheung (2003) do not initially provide any overall measure of efficacy, but do specify one in their latest publication (Slavin and Cheung 2005: 31). According to the latter, the median effect from 13 studies for primary school models is 0.45 and the sample size-weighted effect is 0.30.

► The effect of bilingual education programmes on second language acquisition and educational success is not yet proven

Thus, overall, the positive effects appear to predominate and, moreover, to a greater extent than those specified by Greene. Consequently, this more recent contribution reinforces the original conclusion that the effect is a more positive one with the proviso, however, that there are far too few suitable studies available to enable a definitive judgement (Slavin and Cheung 2005: 31). Based on the available evidence, written language teaching in both programmes combined with “appropriate adaptations of the English program for the needs of English language learners” (Slavin and Cheung 2005: 33) is recommended as the most suitable method for the promotion of bilingual development.

The reaction to this was, in turn, critical, and the conclusion was reached that despite all the effort made to clarify this question, evidence of the effectiveness of bilingual education still has not been provided (Rossell and Kuder 2005). Rossell and Kuder’s response to Greene’s meta-analysis consisted in the re-calculation of the effect sizes against the background of the correction of (some) errors in Greene, on the one hand, and the weighting of effect sizes by sample size deemed necessary by Rossell and Kuder, on the other (cf. footnotes 11 to 13 in Rossell and Kuder 2005: 61). All of the effects from Greene’s meta-analysis disappear in the re-calculation (for details of the results of the recalculations for the eleven studies, cf. also the overview in Rossell and Kuder 2005: 63 and Table 3 there). Rossell and Kuder’s response to the analysis/analyses carried out by Slavin and Cheung mainly consists of a (sometimes strong) criticism of the criteria and selection of the studies and the evaluation of the effect sizes (Rossell and Kuder 2005: 65 ff.). Finally, the assessment of the two meta-analyses is summarized as follows: “At this point, we can say that our reanalyses of both Greene (1998) and Slavin and Cheung (2004, 2005)

do not support the conclusions they draw regarding the superiority of bilingual education over a mainstream classroom.” (Rossell and Kuder 2005: 69)

Rossell and Kuder also express the view, however, that at least the bilingual measures did not cause a “disaster”. Instead, they believe that the problem is (was) the view derived from the Cummins hypothesis that the second language can only be learned in the context of the first and this resulted in programmes which included (unnecessary) bilingual education for a too long period of time which could have been utilized more effectively. Moreover, in the review of the debate surrounding the efficacy of bilingual education programmes, it was shown for the studies of Thomas and Collier (1997, 2002), which had always been presented as unquestionable evidence in favour of such programmes, that they also contained serious methodological deficits and reported, at least in part, misleading and inconsistent findings which can only be assessed through meticulous reconstruction (Söhn 2005: 38 ff.; on this point, cf. also Hopf 2005: 240 f.).

Even if – in view of the criticism of Greene, Slavin and Cheung and Thomas and Collier – one is not yet ready to admit that the matter has been clarified and that bilingual education has no quantifiable effect on second language acquisition and school (reading) performance after all, it should at least be noted that even after many years of attempts to clarify this issue, a consistent and uncontroversial response to the (basically simple) question as to whether bilingual education programmes have a quantifiable effect on second language acquisition and school performances or not still has *not* been provided. At best, the most general result of the controversies which is also shared by all of the parties involved in the debate is that bilingual education does not give rise to any disadvantages in terms of L2 acquisition and school performance. However, there is clearly no such agreement about firm effects and advantages that the programmes could be justified by references to their effectiveness and that their critics could be convinced by unquestionable empirical findings. The main problem with all of these evaluations and the probably most important cause of the complications and divergences in the assessment of the efficacy of bilingual programmes would appear to be the extremely poor methodological quality of the vast majority of the studies on its effects: i.e. no control groups, no premeasurements, no randomization or other controls of background variables, skewed and too small samples etc. (cf. the overview of the methodological problems and the criteria necessary for an adequate analysis in Slavin and Cheung 2005: 9 ff.; Söhn 2005: 19-23). The situation is quite similar to the striking methodological deficits of the so-called evaluation studies on the language and integration courses in the Netherlands and Sweden, for which it is also impossible to say whether they achieve their stated aims or not (on this point, cf. the empirical findings presented in Chapter 3.2). All of the evaluations of the effects suffer in the end from this uncertainty as to whether even the studies which are employed in the meta-analyses and which are carefully selected in an unbiased way and in accordance with methodological criteria allow to draw any conclusions on the effects and it continues to be difficult to reach a definitive judgement (on this point, cf. again in conclusion Slavin and Cheung 2005: 33). As is the case for the state-ordained language and integration courses in the Netherlands, Sweden and now also in Germany (cf. also Chapter 3.2 above and Schönwälder, Söhn and Michalowski 2005), up to now no single methodologically adequate empirical study has been carried out which

would make it possible to find a reliable response to the question as to the efficacy of bilingual education (on this point, cf. also Hopf 2005: 249), *despite* the fact that a series of corresponding practical and political measures – which also involve considerable costs – have been attempted, set up, recommended and planned for some time now.

6. Language and the Labour Market

Labour market success constitutes both the *structural* core of the (intergenerational) integration of immigrants and the central mechanism for the emergence of ethnic stratification (cf. also Chapter 1). A series of empirical findings provide evidence for the generally poorer positioning of immigrants on the labour market (cf. in general and for the situation in the USA, the early contribution by Chiswick 1978 or the overview in Stolzenberg and Tienda 1997: 26 f.; for Germany, cf. *inter alia* Dustmann 1993; Seifert 1995; Bender and Seifert 1996; Granato and Kalter 2001; Konietzka and Kreyenfeld 2001; Kalter and Granato 2002a, b; Constant and Massey 2003; Granato 2003; Kogan 2003, 2004a, b; Seibert and Solga 2005). This chapter deals with the theoretical arguments and empirical findings on the importance of language in this context, including the effects of competent bilingualism and the special situation in Canada.

6.1 Language and productivity

The general assumptions from the human capital theory can be applied to the special case of immigrants to explain ethnic differences in labour market placement (cf. in particular the overviews in Granato 2003: Chapter 3; Kalter 2003: Chapter 3; Kogan 2004a: Chapter 2 and also Chapter 2 above): employment, occupational position and income are determined on the basis of the productivity of the suppliers of work and this varies largely in accordance with education, occupational experience and occupational training. In the case of immigrants, the problem arises that their human capital, for example education obtained in the country of origin, often cannot be utilized at all or only to a very small extent (cf. in general Chiswick 1978; McManus, Gould and Welch 1983; Konietzka and Kreyenfeld 2001 or, in particular, Friedberg 2000 and the systematic overview in Kalter 2005b: Chapter 1.2; also in general Chapter 2 of this report). In most cases, the ethnic differences in labour market success already disappear empirically when only education is controlled for (for immigrants in the USA in general, cf. Chiswick 1978 and specifically on Mexican immigrants in the USA, cf. Trejo 1997 or Dávila and Mora 2000a and b; on Germany, cf. Kalter 2005b). However, in the case of certain ethnic groups, it is not uncommon for these differences to remain even after controlling for all background variables (on the Mexican immigrants in the USA, cf. Trejo 1997: 1252 ff.; on the Turks in Germany, cf. Kalter 2005b: 323, Figure 4, and Seibert and Solga 2005: 374-379, Tables 2 to 5). Three mechanisms are usually identified as responsible for the still remaining ethnic differences: ethnic discrimination, the existence of (unobserved) additional characteristics and the availability of ethnic options which are easier to access.

Differences in the usability of human capital arising from the influence of linguistic (in)competence are another obvious option for the explanation of such differences in the labour market placement of immigrants (cf. McManus, Gould and Welch 1983: 102): if the occupational positioning of productivity follows the human capital of applicants and if

linguistic skills influence the productivity of the human capital, this should affect labour market success *in addition* to the other mechanisms (cf. Kossoudji 1988: 210 f.). There are basically four processes associated with linguistic skills that affect the productivity of a given human capital: the degree of *cultural fit* of the relevant language with the sector in question – this concerns the lack of usability of an L1 in the new environment; the general *communication value* of a language as expressed and quantified by the concept of the Q-value (cf. de Swaan 2001 and Chapter 3.1); the *relevance of linguistic communication* in the context of an occupational activity, for example for manual tasks that do not require major communicative agreements and services as compared with consultancy services or activities in the media sector; and its *form* (i.e. written versus oral) whereby in functionally differentiated societies, knowledge of the written form of a language is generally associated with greater productivity than mere understanding and speaking.

Other factors may reduce the productivity of a given endowment with human capital defined on the basis of cultural fit, communication value, communicative relevance and form. A distinction must be made between two aspects of these additional reductions: the first concerns reductions in chances for employment or in income which arise in the context of the *demand* for work by employers. Certain (statistical) *discriminations* based, for example, on accent, on the one hand and the fear of increased *transaction costs*, due to, for example, coordination problems or learning costs in the case of linguistic deficits, on the other, come into play here. The second aspect involves reductions arising in the context of the *supply* of work, in particular through restraint from the submission of applications for better paid positions (in the long term). More easily available *intervening opportunities*, for example in the case of the existence of an ethnic niche economy, and, hence also, indirectly the (regionally concentrated) group size of an ethnic minority, become particularly important here. To this are added information deficits and uncertainties on the part of applicants regarding their prospects of success which result from their possible integration in homogenous and limited *ethnic networks*.

Figure 6.1 provides an overview of the specified relations between certain empirical circumstances and the effects on labour market success that may be expected theoretically. The report on the most important *empirical* findings on the specific effect of language proficiency on labour market success is largely structured on the basis of this presentation.

Figure 6.1: Bridge hypotheses on the relation between the empirical conditions and the constructs used in the explanation of labour market success

Empirical conditions	Hypothetical effect on labour market success
Endowment	
Human capital (education, occupational experience)	+
Language proficiency (L2)	+
Variations in Productivity	
Cultural fit	+
Communication value (Q-value)	+
Communicative relevance	+
Language form	+
Reductions	
Demand: (Statistical) discrimination	-
Transaction costs	-
Supply: Intervening opportunities (group size)	-
Ethnic networks (information, uncertainty)	-

6.2 Linguistic assimilation and labour market success

While the empirical studies available on the special relations between migration, language and labour market success are not very numerous, almost all studies contain references to the soundness of the above-described theoretical mechanisms underlying the correlation between language proficiency and labour market success. The main contributions involved here are those by Berman, Lang and Siniver 2000; Blackaby, Clark, Leslie and Murphy 1994; Blackaby, Leslie, Murphy and O’Leary 1998; Bleakley and Chin 2002, 2004a, 2004b; Bloom and Grenier 1992; Carliner 1981; Carnevale, Fry and Lowell 2001; Chiswick 1991, 1998; Chiswick, Lee and Miller 2002d; Chiswick and Miller 1992, 1995, 1999; Chiswick and Repetto 2001; Christofides and Swidinsky 1998; Dávila and Mora 2000a and b, 2001; Demel, Kohlbacher and Reeger 2003; Dustmann 1994; Dustmann and Fabbri 2003; Dustmann and van Soest 2001, 2002; Fry and Lowell 2003; García 1995; Gazioglu 1996; Gonzalez 2004; Hayfron n.d., 2001; Kalter 2005a and c; Kossoudji 1988; Lindley 2002; McManus, Gould and Welch 1983; Mora 1998; O’Leary, Murphy, Drinkwater and Blackaby 2001; Pendakur and Pendakur 1998, 2002; Rivera-Batiz 1990; Shields and Wheatley Price 2001, 2002; Stolzenberg and Tienda 1997; Tienda and Neidert 1984; Trejo

1997 and van Tubergen 2004: Chapters 6 and 7; for an overview of older studies on the USA and Canada, cf. also Bloom and Grenier 1992: 374 ff., Table 9-1. The summary of the empirical results on the impact of second language acquisition provided below starts with the effects on income because most of the available studies address this topic (and in many cases exclusively). This is followed by an examination of the question as to whether and how the second language affects labour market placement (i.e. employment, occupational position) – which clearly pre-structures income. The exploration of this issue is complemented with findings on the (statistical) interaction effect of language and human capital on labour market success and comments on the stability of the findings based on an international comparison.

Income

The effect of the *cultural fit* of a language on the receiving context is also almost always found empirically (cf. the list of empirical studies above, in particular the various studies by Chiswick and his co-authors for the USA, Canada, Australia and Israel and the findings in Dustmann and van Soest 2002: 483, Table 5; Dustmann and van Soest 2001: 671, Table 4; Lindley 2002: 473, Table 2, Gazioglu 1996: 107 f., Tables 9 and 10, and Dustmann and Fabbri 2003: 711, Table 7 for Great Britain). According to the empirical studies, the also otherwise important variables of education, family status and, in particular, occupational experience have still the strongest effects on income. Language (L2), however, has a significant *independent* influence on income. It should be noted here that those *indirect* effects of language are already contained in the effect of education which go back to the correlation between language and educational success (cf. Chapter 5), occupational training and occupational experience. Thus, the remaining direct effect of language skills on labour market success is particularly worthy of note. It refers to the directly productive effects of proficiency in the language of the receiving country. This direct effect of language is not, however, observed in all studies. Bleakley and Chin (2002: 23 ff.), for example, found the usual strong effect of language on income (Table 3) after controlling for the other relevant

► **Clear independent effect of language skills on income – particularly in communicatively demanding professions**

variables *except* education; however, the introduction of education as a control variable explains over 90 percent of the language effects (Table 8; on the strong indirect mediation of the effect of L2 proficiency on income, cf. also Bleakley and Chin 2004b: 488 f.). There is an obvious reason for such (individual) anomalies in the direct effect of language: the direct effect of the cultural fit of language and its effect as a productive resource should generally be *underestimated* if, as is usually the case, no further differentiation is made in terms of the special circumstances, on the basis of which the effects of language can change, for example based on communicative relevance (see below).

There are very few empirical findings on the benefit to be derived from a language through its *Q-value*. A study that presents such empirical findings is the one carried out by Chiswick and Repetto (2001) for Israel. In an analysis of the income of immigrants in Israel, the authors observe that proficiency in English and Arabic exerts additional effects (Chiswick

and Repetto 2001: 221, Table 10.9). As the language with the highest Q-value, English has a clearly *positive* influence on income, whereas proficiency in Arabic is associated with *reductions* in earnings – in both cases independently of and additional to the effects of proficiency in Hebrew. Chiswick had already presented a similar finding in an earlier study (1998: 266, Table 8, columns 4 and 5), in which the origin from an Anglophone country alone gives rise to an income advantage (always after controlling for all other background variables and L2 language skills in Hebrew).

In one of the very few systematic studies on the influence of the *communicative relevance* of occupational activities on linguistically determined variations in income, Berman, Lang and Siniver (2000) carried out separate analyses based on activity characteristics for immigrants in Israel and the acquisition of Hebrew language skills, i.e. firstly for construction workers and gas station attendants and, secondly, for software specialists and technicians. According to their findings, a correlation exists between language acquisition and income *only* in the case of the software specialists and technicians, but *not* for the construction workers and gas station attendants (Berman, Lang and Siniver (2000: 15 ff.; Figures 1a and 1b). Gonzalez (2004: 24 f., Table 9) observed similar results for the income effects of language proficiencies for six different categories of occupation: managerial and repair occupations emerged as being subject to the strongest reductions in income due to language deficits and the agricultural and service occupations the weakest. The assumption here is obvious: there are occupations and sectors of the labour market in which language has a higher productive value than in others and this, in turn, is reflected in the effectiveness of language for income.

Little research has also been carried out on the different effects of the various *forms of language* (i.e. understanding, speaking, reading, writing) and the special significance of the mastery of *written*-language skills on income. However, the evidence in the few available studies is clear: understanding is a minimum requirement and income only increases notably with proficiency in written language, always after controlling for the other variables for labour market success (cf. Chiswick and Repetto 2001: 220, Table 10.8; Rivera-Batiz 1990: 298 f., Table 2 for first and second-generation immigrants in the USA; Dustmann 1994: 152 ff., Tables 7 and 8 based on the SOEP for Germany; and Chiswick and Miller 1999: 79, Table 8, column vi for a sample of legalized, formerly illegal, immigrants from non-English-speaking countries in the USA). Finally, the significance of “understanding” as a minimum condition for almost any appreciable labour market success is shown in a study by Carnevale, Fry and Lowell (2001: 161 ff.): without understanding in everyday communication, the “higher” forms of language proficiency are of no use, however, they are particularly beneficial when combined with it.

In terms of the effect of *discriminations* on income, it is necessary to differentiate between two forms of discrimination: direct discriminations, such as, for example, social distances which are activated by accents, and conditional discriminations which arise due to uncertainties regarding the “true” characteristics of applicants and disappear when this uncertainties do not or do no longer exist. One of the very few studies on accent-based *unconditional discriminations* in terms of income is that by Dávila, Bohara and Sáenz (1993: 907 ff.). In addition to the – as usual effective – human capital factors, accent actually has a

clearly independent negative effect on income. It would even appear that this would largely explain the effects of L2 proficiency themselves. On the whole, despite all of the methodological reservations which the authors themselves raise, the result is clear enough: the symbolic effect of accent *does* give rise to reductions in income, although such reductions are not associated with all accents (cf. also Pendakur and Pendakur 2002: 167 f.).

In their comparison of Asian immigrants and white (non-Hispanic) US citizens, Stolzenberg and Tienda (1997) made an explicit attempt to empirically identify the effects of *conditional* discrimination. The consideration behind this study is that language deficits or accents can only have an independent discriminatory effect beyond the productivity effect as human capital, if a corresponding stereotype has not already been activated through other non-linguistic and highly visible characteristics, such as facial form or skin colour.

► **“Statistical” discrimination in income
Based on accents**

For Stolzenberg and Tienda, perfect language proficiency and a high level of education are the “conditions” for “economic assimilation” – which would otherwise be prevented due to (statistical) discrimination – among immigrants whose appearance alone activates certain stereotypes or uncertainties. They actually observe this pattern in an analysis of the microfile of the US census of 1980 for the two groups of Asian immigrants, on the one hand, and white (non-Hispanic) US citizens, on the other (Stolzenberg and Tienda 1997: 36 ff.). Accordingly, the Asian immigrants with lower levels of education and imperfect language skills would have to accept a considerable reduction in income. This is the effect of (statistical) discrimination assumed by the authors for this group. However, they completely compensate for this disadvantage with increasing educational levels and improvement of language skills. The result not least corrects the common explanations for ethnic disadvantages on the labour market which assume exclusively “unconditional” discriminations against certain groups according to “tastes” and thus disregard their other (labour-market-relevant) characteristics (see above). This is, therefore, (also) an indication that such discriminations need not necessarily constitute reflexes of social distance in general, but may be the consequence of uncertainties with regard to latent productivities: if someone is identifiable as a immigrant from a different ethnic background due to his appearance and if no other indicators of a higher productivity are available, the employer will react with statistical discrimination, if only to minimize the risk of an erroneous placement.

There is again very little and only indirect evidence available with regard to the reduction of actually achievable income through restraint at the level of the *supply* of work as a result of *intervening opportunities* and information deficits due to “exclusive” integration in ethnic networks. Only two (recent) studies refer directly to this (cf. also the studies on occupational placement below). The first of these studies examines the effects of geographical proximity to the country of origin on the incomes of US citizens of Mexican origin (Dávila and Mora 2000b: 134 ff.), while the second one explores the significance of ethnic networks in the taking up of occupational positions (Pendakur and Pendakur 2002: 168 ff.). In Dávila and Mora’s study (2000b), US citizens of Mexican origin are identified in five cities bordering Mexico (Brownsville, El Paso, Laredo, McAllen, all in Texas, and San Diego in California) from the microfile data for the 1990 census and compared with

citizens in cities in other regions in the USA. Following the control of the human capital variables, however, no special context effects of spatial proximity to the society of origin remain (Dávila and Mora 2000b: 142 ff., Table 4). It would appear that – in accordance with the premises of classical labour market theory – the Mexican US residents quickly distribute themselves across the country according to their (marginal) productivity and, when this is controlled for, they respectively achieve the same earnings. It is only in a separate analysis of Mexican immigrants and US-born citizens of Mexican origin that a “border” effect emerges for the men (Dávila and Mora 2000b: 149, Table 6). This is the only available indication of a Mexican ethnic “mobility trap” based on mere proximity to the border. As opposed to this, Pendakur and Pendakur (2002: 168 ff.) observe the supporting effect of ethnic intervening opportunities and the decreasing reductions in earnings with increasing group size for immigrants in Canada with “non-official” languages (on this point, cf. also Chapter 6.3). Significant reductions in earnings exist in all cases for members of the “non-official” language minorities, however these disadvantages decrease with group size and in extreme cases actually turn into income *advantages*. Gazioğlu (1996: 94 f.) observes similarly positive enclave effects among Turkish immigrants in Great Britain. Mora’s findings (1998: 589 f.) of a comparison of Los Angeles and Miami according to which the relative disadvantages of linguistic deficits in terms of income are smaller in Miami – with its large and well established Hispanic community – than in Los Angeles, can also be interpreted in this way.

Overall, it emerges that when language proficiency is taken into account, even initially serious ethnic disadvantages on the labour market disappear (completely) (on this point, cf. the findings in Kalter 2006: 151 ff., 156 ff. as a criticism to Seibert and Solga 2005 who identify clear ethnic disadvantages among Turkish youths without taking language skills into account and incorrectly evaluate these as the consequence of – statistical – discrimination). A similar situation prevails with respect to the negative labour-market effects of exclusive inclusion in ethnic networks, which prevent immigrants from obtaining relevant information or prevents them from applying for positions on the extra-ethnic (primary) labour markets by providing intervening opportunities (cf. also Kalter 2006: 152 f.).

Employment and assumption of employment

The realization of income is the result from the interaction of supply and demand for productive labour services, which is controlled by linguistic skills, and the placements and occupational mobility based on this. According to Shields and Wheatley Price’s study on immigrants in Great Britain (2001: 744, Table 2; based on the data from the Fourth National Survey of Ethnic Minorities; cf. Modood et al. 1997), like income, *employment* opportunities are clearly influenced by English language skills. It is worth mentioning that the ethnic differences do not disappear here (based on a comparison between the immigrant groups only): after controlling for all of the variables, it emerged that Indians, African Asians and Chinese have the best employment opportunities while the worst situation with regard to employment prospects is that experienced by Pakistanis, Bangladeshis and (black) immigrants from the Caribbean. Dustmann and Fabbri (2003: 708, Table 5) report similar findings for the situation in Great Britain with regard to the importance of

language in the assumption of employment, based on the Family and Working Lives Survey (FWLS) of 1994 and 1995, and also for different operationalizations (e.g. self-assessment versus interviewer assessment).

The effects of the language variables on labour market participation or employment are also confirmed by the major internationally comparative multi-context study carried out by van Tubergen (2004: Chapter 6), in which the employment of immigrants from 187 different origin contexts in 18 different (western) receiving countries and various constellations of their ethnic embeddedness were examined. Somewhat surprisingly, previous contact with the language of the relevant receiving country (referred to as the “official language” in van Tubergen’s study) only had a (positive) effect in one case: i.e. on the employment opportunities of the men. This is somewhat contradictory to the common findings from earlier studies, such as those by Borjas (1987) or Jasso and Rosenzweig (1990), according to which precisely this factor actually increases employment opportunities. Van Tubergen (2004: 170) suspects that the deviation in his study with respect to effect of this factor can be explained by the multi-level design, which he uses for the first time and which allows the inclusion of additional background variables such as origin from non-Christian countries or selective migration by individuals with special background characteristics.

The recent study undertaken by Kalter (2005a), in which the transition from blue-collar to white-collar positions is analysed using the SOEP data, is concerned with the effect of linguistic skills on the *assumption of employment* (or occupational mobility). The central finding of this study is that ultimately, as in the case of income, in addition to the standard variables of the human capital theory, the mastery of the L2-language of the receiving country *alone* increases opportunities for the assumption of better employment positions. At the same time, it emerges that ethnic networks and the language of origin (on the effects of bilingualism, cf. below) do *not* have an independent influence on the improvement of occupational status and that the ethnic disadvantages of the Turks that remain following the control of education become statistically insignificant with the linguistic and network variables (cf. Kalter 2005a: 35 f., Tables 3 and 4). Based on this, the relatively low positions of the Turks, even after controlling for education, is obviously a consequence of their in fact lower levels of linguistic assimilation and their exclusion from relevant information as a result of remaining in (exclusively) intra-ethnic networks.

While the chapter of van Tubergen’s international comparative study on the assumption of employment (van Tubergen 2004: Chapter 7) does not include any measurements of the individual language skills of immigrants, access to the language of the receiving country already in the origin context was, at least, recorded. The result is that – *after* controlling for the individual labour-market-relevant variables – L2 proficiency has very strong effects on the assumption of employment: immigrants who have already been exposed to the language of the receiving country in the country of origin have significantly better chances for accessing more attractive occupational positions.

Overall, the (relatively few) studies on the effect of skills in the language of the receiving context on employment and the assumption of employment observe the same patterns as the studies that examine the corresponding effects on income. This is hardly surprising as

income is a consequence of employment, advancement and occupational mobility, and all of these processes – ultimately – follow the productivities of the relevant human capital, of which language is clearly a particularly important and relevant component in terms of the labour-market opportunities of immigrants.

Interaction effects

It may be assumed that language skills are among the *necessary* – albeit not necessarily sufficient – conditions of the use of a given human capital (on this point, cf. also Chapter 6.1 above): deficits in the relevant L2 possibly devalue the productive potential of other skills and opportunities, and the advantages of the different skills can also reinforce each other mutually. This may already be expected from the model of the employment of applicants (of foreign ethnicity) or the supply on a (foreign ethnicity) labour market: demand follows the expected productivity of an applicant, while supply follows the expected success of an applicant. In both cases, expectations (of success) are *combined* with the productivities or income to be attained. A number of instructive empirical studies have been carried out on such interaction effects between language and (other) human capital. In one of the first studies to be carried out on the effects of language on the labour market, McManus, Gould and Welch (1983) observed that *all* of the independent language effects are mediated through such statistical interactions. Based on this, language deficits *reduce* the usability of possibly existing opportunities on the labour markets and, in particular, under the *better* conditions: they reduce the (productivity) effect of a *better* education, *greater* occupational experience and the possibilities for accessing better positions through contacts *outside* of ethnic enclaves (McManus, Gould and Welch 1983: 115). Conversely, this means that with the improvement of language skills, the productivities (and income) converge *disproportionately*. This corresponds to the correlation which Stolzenberg and Tienda described as “*conditional* economic assimilation”. Analogous findings are reported by Dávila and Mora (2000b: 143, Table 4) for the statistical interaction between language deficits and education and occupational experience: language deficits reduce productivity advantages *disproportionately*, i.e. they have a *stronger* effect when accompanied by higher educational attainment and greater occupational experience than when accompanied by lower educational attainment and a shorter job tenure. The overall very considerable significance of the interaction between language and other human capital is generally indicative of their usually very strong complementarity. This is demonstrated in particular by Chiswick and Miller (1995) in their study on the dependency of income on language skills among immigrants in Australia. Table 6.1 presents *separately* the effects of education and occupational experience on income for immigrants with poor English skills and immigrants with advanced English skills (after controlling for the relevant other background variables; Chiswick and Miller 1995: 267 ff.).

► Language deficits devalue other qualifications

Table 6.1: The interaction between language skills and education and occupational experience in the explanation of immigrants' income

Variables	Model 1 All immigrants		Model 2 With good knowledge of English		Model 3 With poor knowledge of English	
	OLS	t-value	OLS	t-value	OLS	t-value
Education	0.060	19.1	0.076	19.4	0.020	4.0
Occupational experience	0.013	4.5	0.020	5.4	0.008	1.3
Occupational experience (squared/100)	-0.027	4.8	-0.039	5.5	-0.016	1.8
Duration of stay	0.003	3.3	0.003	3.2	0.003	1.1
Language skills (L2)	0.053	2.5	---	---	---	---
R ²	0.15		0.15		0.05	
N	7288		5540		1748	

Note: (OLS) Coefficients in three linear regression models; significant findings printed in bold.

Source: Chiswick and Miller 1995: 270, Table 5, columns 2, 4 and 6

The labour-market-relevant human capital has hardly any effect among immigrants with poor language skills, the returns from education and work experience, however, increase disproportionately with the improvement of language skills.

Based on these results, it would appear that, similar to the interaction of ethnic concentration and other learning circumstances in the context of language acquisition and education, there is a *cumulative* effect on the labour market: the reduction of (language) deficits has a positive effect on income, in particular when accompanied by the other better conditions, while better education is of little use if language skills are poor. Thus, failures in language acquisition in *younger* years have a particularly negative effect on labour market success, and this in fact both directly and indirectly and, moreover, in a mutually reinforcing way: educational opportunities decline with language deficits and, as a result of this, labour market opportunities in later life are also reduced. However, even those who achieve educational qualifications will derive little benefit if they do not have the corresponding (second) language skills.

International comparison

Overall, the studies on the effects of language on income and on its effect on employment and the assumption of employment confirm the general finding according to which linguistic assimilation is a centrally necessary – albeit not necessarily also sufficient – precondition for the structural integration of immigrants in the various receiving

countries (on this point, cf. also the study by Demel, Kohlbacher and Reeger 2003: 73 f. on immigrants on the labour market in Vienna; the study by Chiswick, Lee and Miller 2002d: 20 on the significance of written language skills for the explanation of the educational effects on the employment opportunities of immigrants in Australia and the study by Tienda and Neidert 1984 on Hispanic immigrants in the USA). Based on all the available evidence, it is possible to generalize the effects of linguistic assimilation on labour market success (i.e. employment, assumption of employment, income) found in the individual studies for the various receiving countries: in their main findings, the different studies by Chiswick (and his co-authors) for the USA, Canada, Australia and Israel, the studies by Dustmann and van Soest for Germany and those by Dustmann and Fabbri, Gazioğlu and by Shields and Wheatley Price for Great Britain all confirm the basic hypotheses of the human capital model. Table 6.2 presents the corresponding summary of language effects on income as presented by Chiswick and Miller (1995: 276, Table 8).

Table 6.2: The effects of proficiency in the language of the receiving country on the income of immigrants in Australia, the USA, Canada and Israel

	Australia		USA	Canada	Israel
	1981	1986	1980	1981	1983
Effect of language (OLS)	0.053	0.083	0.169	0.122	0.110
t-value	2.5	4.8	12.5	2.4	12.7

Note: (OLS) Coefficients in five linear regression models; the following variables were also controlled in all models: education, occupational experience, duration of stay in years, country of origin, information on the region; additionally in the USA and Canada models: number of weeks worked.

Source: Chiswick and Miller 1995: 276, Table 8

Van Tubergen's (2004) internationally comparative (multi-level) study confirmed these relations between linguistic assimilation and labour-market success over a far more extensive framework and using more up-to-date data, including in particular survey studies. The only thing that may be annoying here is the almost boring uniformity of the empirical findings on the significance of the initially only culturally anchored language skills for the structural integration of the immigrants, which may sometimes obscure the extreme importance of linguistic assimilation and its conditions: "In general, language capital is too obvious to be noticed" (Chiswick and Miller 1992: 279).

6.3 Bilingualism and labour-market success

Bilingualism means the competent mastery of two languages and, in the case of immigrants, the acquisition of the language of the receiving country *and* the retention of the native language (cf. Chapter 4). According to the theoretical model, it is not necessarily associated with an advantage on the labour market as compared with linguistic assimilation,

and this applies if the relevant additional language has no (additional) productivity value, as is often the case with an immigrant's L1 with a low Q-value. Three questions arise in this context: How would it be possible to conceptualize theoretically when and why bilingual skills give rise to advantages on the labour market? Is this confirmed by the empirical findings? What is the situation with regard to bilingual competences in receiving countries with several official languages such as Canada?

Theoretical foundations

A simple model for the derivation of the conditions under which bilingualism pays off on the labour market can be found in Carliner (1981: 386 f.).

The model builds on the general basis according to which the acquisition of an (additional) language is dependent on its use value, on the one hand, and the costs of acquisition, on the other (on the acquisition of bilingualism, cf. Chapter 4.1). The use value on the labour market thereby depends on the productivity of the language(s), on the one hand, and the demand for and available supply of speakers in certain segments of the labour market, on the other. Against this background, Carliner formulates seven specific assumptions. The *first* assumption presumes a labour market with a number $A(n)$ of native language speakers of a language A and a number $B(n)$ of native language speakers of a language B, as is the case, for example, with English and French speakers in Canada. *Secondly*, three types of jobs are assumed to exist: jobs that require language A, jobs that require language B and jobs that require bilingual skills in A and B. *Thirdly*, the job holders favour an activity in their own L1, but would invest in the acquisition of the other language if this is rewarded on the labour markets. *Fourthly*, learning skills are not evenly distributed, thus a positive slope arises between the incentives for acquisition of the other language and the "supply" of bilingual speakers. *Fifthly*, job holders are indifferent to jobs involving the respective other language and the bilingual activities. *Sixthly*, it is assumed that due to, for example, the specific nature of the external relations (e.g. customers and other business partners in an other country with A as lingua franca), there is always a stronger demand for one of the two languages on the labour-market context involved, with the result that the demand for A-speaking applicants is greater than the supply $A(n)$. Correspondingly, and *seventhly*, the demand for B-speaking applicants is smaller than the supply $B(n)$, at least as long as the remuneration for the B jobs is the same as for the A jobs and bilingual jobs.

The consequence of these assumptions is that the income for the A jobs would generally be higher than that for the B jobs, as would be the case, for example, with English in Canada as a whole due to the proximity to the USA and the higher market value of English as compared with French. Because the bilingual speakers are indifferent to the A jobs and bilingual jobs, there should, moreover, be no income differences between the A jobs and the bilingual jobs. Thus, bilingualism *does not* yield any additional benefits for the A speakers beyond those already gained from the mastery of the "more productive" language. Based on this, when the aspect of market productivity is taken into account alone, there are no bilingual speakers with A as L1 because the costs of investing in B is not worthwhile for them and therefore all of the bilingual speakers would be speakers of B as L1. Bilingualism is entirely worthwhile for the latter because their L2 competence in A gives them access to the better-paid A jobs. Among the monolingual speakers, those with A as L1 would have the highest income followed by those with B as L1; all other monolingual speakers would

earn less, as is the case, for example, with the so-called allophone immigrants in Canada who only speak a “non-official” language.

If these implications, which can be derived from the human capital theory, apply, it should emerge empirically that bilingualism does *not* pay off in form of a higher income as compared with monolingual assimilation to the dominant national or regional language – with the exception of special cases of direct demands for bilingual services such as those of interpreters or other mediation functions across the linguistic communities. Certain effects would, nonetheless be expected if a dominant national or regional language competes with another language with a very high Q-value, as is the case, for example in the French-speaking provinces of Canada.

Labour-market effects of bilingualism

There are not very many studies which examine the labour-market effects of bilingualism (mainly: Carliner 1981: 392; Chiswick 1998: 266, 269; Christofides and Swidinsky 1998: 131 ff.; Fry and Lowell 2003; Garcia 1995: 154; Kalter 2005a: 19 ff.; Kamphoefner 1994; Pendakur and Pendakur 1998: 97 ff., 2001: 156 ff.; Tienda and Neidert 1984: 528 ff.). These studies unanimously confirm the implications of the theoretical assumptions of the human capital approach and the hypotheses of the Carliner model which are based on them: as a rule, bilingualism is *not* worthwhile for immigrants – as compared with monolingual assimilation – unless the second language has a particular regional or global value which enhances the already elevated human capital associated with it (see below).

In the study by Fry and Lowell (2003: 134, Table 3), which is based on the National Adult Literacy Study (NALS) of 1992, bilingualism was differentiated into two levels of competence: L1 and L2 “good” and L1 and L2 “perfect”. Even with this differentiation, *no* additional income advantage emerged for *either* of the two levels when educational attainment is controlled for. The initially identifiable advantages of bilinguals in the bivariate relations “can be fully explained by their educational advantages over their English monolingual counterparts.” (Fry and Lowell 2003: 133). In an analysis of the SOEP data Kalter (2005a: 36, Table 4) observes a very similar result with a noteworthy extension to the efficacy of ethnic social capital beyond linguistic human capital for occupational placement (transition from blue collar to white collar worker). Initially, Turkish immigrants appear to be at a clear disadvantage as compared with other immigrants. This disadvantage disappears when the L2 language skills are controlled for. As opposed to this, the *L1* language skills do not trigger any special effects. If there is any effect at all, then *deficits* in the L1 would tend to increase the chances of occupational advancement. Based on everything that emerges from the few systematic studies available, it would appear that all that counts is the language of the receiving country, and L1 retention or competent bilingualism has *no* further effect as compared with monolingual assimilation; on the other hand, however, it does not do any particular harm either (for similar observations on Hispanic immigrants in the USA, cf. Tienda and Neidert 1984: 530 f.; on Italian and Turkish immigrants in Switzerland, cf.

► Advanced proficiency in the language of the country of origin in addition to the national language of the receiving country has practically no effect on labour-market success

Grin, Rossiaud and Kaya 2003: 438 ff.; and on German immigrants in the USA in the 1940s, cf. Kamphoefner 1994: 857, Table 8; cf. also the findings on the effect of the mastery of the non-official immigrant languages in Canada presented below).

Moreover, if they have any effect at all in this context, ethnic networks only have *negative* effects on occupational placement (on this point, cf. also Kalter 2005a: 36, Table 4). It may be assumed that this has something to do with the limited scope of intra-ethnic networks, which do not provide access to the necessary information (and informal relationships) that could provide access to more attractive positions (cf. also Chapter 6.1). Even ethnically mixed networks do not provide additional help here. Given that the group size and, hence also, the markets in which the L1 proficiency and ethnic networks could play a role in labour-market placement are simply too small for most immigrant groups, bilingualism and ethnic social capital in general can only be relatively limited in their effects. Correspondingly, certain positive effects could be expected based on group sizes. The above-mentioned findings on the effect of ethnic intervening opportunities based on group size provided some evidence of this, in particular the studies carried out by Pendakur and Pendakur (2002). According to these findings, the group size only tends to reduce the disadvantages or at best compensate for them – if such effects are observed at all (on this point, cf. also Fry and Lowell 2003: 137).

The only indication of positive effects of bilingualism on labour-market success are found in two studies by Saiz and Zoido (2002: 12 ff., 2005: 530 ff., Tables 5 and 6) concerning US college graduates, i.e. employees with *high* qualifications (and not necessarily immigrants). This confirms the importance of language as a beneficial complementary factor of elevated human capital, in particular: proficiency in a relevant second language may even reinforce productivity when it is combined with higher educational attainment (and in the context of communicative activities). It also emerges here, however, that not all languages yield the same benefits: German leads to the highest increases in income and Spanish to the lowest. An obvious interpretation of this is that the supply of Spanish in the USA (in the relevant occupations) is greater than that of other less common, but useful languages there.

Canada

Canada is one of the – relatively few – immigration countries with more than one official language (English and French) and with an explicit multi-lingual language policy which involves above all the institutional promotion and preferential treatment of French, in particular in the province of Quebec (on the history of the individual legislative acts in Canadian language policy, cf. Vaillancourt 1992: 179-195 or Fenwick 1982: 2 ff.). The background to the Canadian policy of multilingualism was (and is) the clear economic differences between the Francophone and Anglophone sectors of the population. Part of the efforts to promote French was associated with the hope of a sustainable improvement in the labour-market situation of the French-speaking sector of the population as was actually achieved in particular through the corresponding re-orientation of the public service in the Francophone areas of Canada. Theoretically, (according to the above-presented model developed by Carliner), it may be expected that there would be no special premium for bilingualism – beyond proficiency in English – on the open labour market. As opposed

to this, premiums may well exist for the acquisition of English in the Francophone provinces (and hence for French-English bilingualism): the institutional preconditions generate a tendency to “assimilation” to French, but in view of the strong integration with the Anglophone regions (and with the USA), additional proficiency in English causes a clear increase in productivity. The speakers of other non-official languages should not, however, expect any (additional) premiums, not even for bilingualism with English as L2. Overall, however, significant benefits should accrue for Anglophone monolinguals and the stronger the (economic) relations with the Anglophone regions (and the neighbouring USA or the global economy) and the weaker they are with the Francophone regions, the greater these benefits should be.

These theoretical assumptions are largely confirmed by the – for once quite numerous – empirical studies on the effect of the two official languages or bilingualism on labour market success in Canada (for an overview of the studies in particular on Canada up to the mid-1990s, cf. Bloom and Grenier 1992: 373-381). The empirical analysis carried out by Carliner, following on from the development of his theoretical model using data from the Canadian census of 1971 (with results for Canada overall, its English-speaking region and for three cities, i.e. Montreal, Quebec and Toronto), confirms initially the clearly poorer economic position of the French-speaking sector of the population at this time, including, in particular, that of the monolingual French speakers (Carliner 1981: 389 f., Table 1; similarly cf. Bloom and Grenier 1992: 389 ff., Tables 9-4 to 9-6 for Quebec as compared with Canada in general; Shapiro and Stelcner 1997: 118 ff., Tables 1 to 3; and Grenier 1997: 290 ff. for Ontario and New Brunswick). The allophone immigrants who speak a non-official language, and in particular the male members of this group, however, have always the lowest economic position (cf. Shapiro and Stelcner 1997: 119, Table 1). The generally observed findings on the effects of bilingualism are confirmed by the multivariate analysis for this period (again after controlling for the relevant background variables): as compared with English-speaking monolingualism, both monolingual French-skills and English-French bilingualism are meaningless or even tend to be disadvantageous. According to the study by Shapiro and Stelcner (1997), the worst results by far are achieved already at that time by the allophone immigrants who only speak one non-official language; these disadvantages are strongest in the two French-speaking cities of Montreal and Quebec and weakest in the English-speaking regions of Canada.

However, Canadian language policy which consists, in particular, in the institutional promotion of French in the Francophone regions has had clearly identifiable effects in the course of the decades. Three major studies have been carried out on this development: i.e. by Shapiro and Stelcner (1997), by Vaillancourt (1992) and by Christofides and Swidinsky (1998), all three of which are based on the Canadian censuses of 1970, 1980 and 1990 (and in some cases also on special microdata files which would explain certain discrepancies in the findings). The analysis by Shapiro and Stelcner (1997: 119) is particularly instructive in terms of the development of the income differences in the different language categories as compared with monolingual Anglophones. The initially strong disadvantage of the Francophone speakers as compared with the monolingual English speakers in the 1970s has declined, in particular for bilingual Francophones, for whom there has been no further

reduction in income since the 1980s. However, a noticeable deficit still exists for monolingual French speakers. It is not surprising that allophone speakers who do not speak either of the official languages experience the greatest disadvantages of all. Proficiency in either of the two official languages clearly improves their situations, however they still face considerable disadvantages and their situation has not been changed in any way over the course of the implementation of the Canadian language policy. These relations and developments are largely confirmed by the analyses

► **Canadian language policy does not have any effect on the labour-market success of "allophone" immigrants**

carried out by Christofides and Swidinsky (1998). The central findings of their study may be summarized as follows (Christofides and Swidinsky 1998: 179, cf. also 149 ff.): initially (1971) there were considerable reductions in income for monolingual French speakers as compared with monolingual English speakers and neither of the two forms of bilingualism (with French as L1 or English as L1) had significant effects on income. In 1981, the income disadvantage for monolingual French-speaking still existed, but had become statistically insignificant. Now, positive effects had also emerged for both forms of bilingualism. This pattern is confirmed for 1991. Almost no differences were observed in the incomes of monolingual speakers of the two official languages in 1991. From a regional perspective (i.e. Quebec as compared with the English-speaking regions), there are some indications that the targeted promotion of the French language has led to advantages for both Anglophone and Francophone bilingual speakers, but also that certain income penalties were associated with Anglophone monolingualism in 1991 (see below on the explanation of these penalties). It should, however, be noted that despite all the promotion, monolingual French speakers in Quebec do not earn significantly more than the monolingual Anglophones there. In their analysis of the data of the Canadian census of 1991, Pendakur and Pendakur (2002) finally report largely similar findings and also for other regional differentiations (cf. also Pendakur and Pendakur 1998). This analysis again reveals the familiar pattern of a clear disadvantage, in particular for immigrants whose L1 is a non-official allophone language and, moreover, even if they can speak the official languages. If there is no discrimination, the differences usually tend to disappear almost completely in the latter case. While they also decline here, they remain identifiable. Given that the relevant background variables are always controlled for, the poor labour-market situation of the speakers of a non-official language even when they also speak an official language would ultimately indicate that discriminatory processes are at work here – at least processes involving statistical discrimination. It may at least be said that – as is the case almost everywhere else – immigrants who speak a *foreign language* are at a consistent disadvantage even in Canada with its explicit policy of multiculturalism, although the Canadian language policy has somewhat alleviated the disadvantages previously experienced by the *Francophone* population.

In view of the empirical findings on the labour-market effects for the two official languages, for bilingualism in the official languages and, in particular, for allophone immigrants, it may not be automatically assumed (as, for example, in Geißler 2003: 25) that the Canadian model supports the plausibility of politically or otherwise motivated multicultural ideas which oppose the “assimilation” of immigrants – both empirically and normatively (on the nevertheless clear empirical trends towards linguistic assimilation to English in

Canada in general, cf. also Grenier 1997: 297 ff.). The multi-lingual openness of the Canadian model refers almost exclusively to the cultural elements defined as institutionally *dominant*, i.e. to a regionally divided and politically supported Francophone or Anglophone *Leitkultur*, i.e. “hegemonic” culture. Entirely contrary to the hopes sometimes associated with it, as in almost all other cases, the Canadian model appears to demand a “abandonment of the culture of the country of origin”, at least in relation to the *allophone* languages and the aspect which is ultimately crucial to the social integration of immigrants and which is mediated through them: labour market success.

7. Summary

The main results of this Research Review can be summarized in a few brief points. Based on a summary of corresponding hypotheses from linguistics, the psychology of language, economics and sociology, language acquisition may *theoretically* be understood as a more or less intentional investment under certain social conditions which is generally dependent on motivation, access, efficiency and the costs of this investment. Four different levels can be differentiated among the social conditions of second language acquisition by immigrants: the family and migration biographies of the individual immigrants, the country of origin, the receiving country and the ethnic context. The social conditions each form concrete exemplifications of the (four) basic theoretical constructs and the statistically observable effects associated with them are explained theoretically by means of corresponding attributions (bridge hypotheses) to the theoretical model. The *empirical* findings that are provided against this background by various studies not only converge almost without exception with the theoretical assumptions – also in international comparisons and across different constellations of ethnic groups – but also find sustained support down to some rather unexpected details, such as certain statistical interaction effects among the relevant conditions. This is applicable to all of the four substantive fields explored in this report: i.e. second language acquisition, bilingualism and language shift, (language-related) school performance and educational success and positioning on the labour market.

The conditions of family and migration biography and those of the ethnic context prove particularly significant for *second language acquisition*, including in particular the age at migration (also that of the parents of immigrant children in relation to the latter's language acquisition), education, ethnic concentration and intra-ethnic relations – and in the latter context, above all, inter-group marriage. The other factors at work here include the duration of stay, prior contact with the second language in the country of origin, media contact with the society of origin and linguistic, spatial and social distances. It is difficult to comment on the effect of language and integration courses which have been established in some countries, for example the Netherlands and Sweden, as (up to now) no suitable empirical studies have been carried out on this topic. Compared with the circumstances of the family and migration biography, the conditions in the origin and host society play a less significant role for the acquisition of the second language, and the central correlations are largely stable across the different contexts of the countries of origin and the receiving countries.

The acquisition of (competent) *bilingualism* necessitates the maintenance or retention of the native language. This too can be understood on the basis of the theoretical model and the empirical correlations correspond to the theoretical assumptions: the more advanced the age at migration and the stronger the integration into the relevant ethnic context, the more likely it is that the native language will be retained. However, this *only* leads to (competent) bilingualism if second language acquisition has already taken place. Given that most of the conditions for second language acquisition, on the one hand, and the retention of the native language, on the other, are effective in opposite directions, retention of the first

language usually takes place at the cost of second language acquisition (and vice versa). Over the course of generations, the opportunities for the maintenance of the native language mostly decline and therefore a clear tendency for monolingual assimilation can be observed down through the generations. Only in some special cases, for example those of larger group sizes or transnational relations, does the maintenance of the native language become a long-term phenomenon and when this occurs it mainly involves linguistic segmentation. Some clarification may be conceived regarding two debates that exist in the context of bilingualism – i.e. the debates surrounding the critical period hypothesis and the interdependence hypothesis. While the strongest form of the critical period hypothesis, according to which competent second language acquisition is impossible after puberty for neuro-physiological reasons alone, is largely untenable, it may be taken as fact that a certain learning outcome can only be achieved at a more advanced age with greater effort. In terms of the interdependence hypothesis, according to which second language acquisition is only possible in the framework of native language proficiency, the findings are mixed, however the evidence is ultimately unclear because the longitudinal studies with multivariate controls of possible background variables which would be necessary to substantiate it have not (yet) been carried out.

In terms of (*language-related*) *school performance* and *educational success*, unsurprisingly, the same conditions apply as those applicable for second language acquisition in general: i.e. age at migration, the education of the parents, the ethnic context and – additionally – the ethno-linguistic concentration in the schools and classrooms. Performance in other school subjects and the entire educational career follow this pattern, also because these are closely related to second language acquisition and are determined by the same background factors. Other circumstances of educational inequality experienced by immigrant children, such as pre-school attendance, school choice, school organization and possible (institutional) discrimination, may also exert an additional influence; however they do not invalidate the identified process of the linguistic mediation of educational success and the effects of the family and migration biography and ethnic concentration in the schools and classrooms. In the case of bilingualism, the mastery of the native language does not have any effects on the educational success of immigrant children, beyond those already associated with proficiency in the second language. There is also almost no systematic empirical evidence for the assumption that bilingual skills have a positive effect on the social and psychological well-being of immigrants/immigrant children beyond the effects already associated with second language proficiency. Indeed, it tends to emerge that greater self-esteem and fewer psychological problems are associated with (linguistic) assimilation rather than with the retention of the native language. Despite the numerous studies and (meta) analyses that have been carried out on the topic, the effect of bilingual teaching programmes with explicit promotion of the native language still remains to be clarified, in particular because methodologically suitable studies are lacking in this area. However, if they have any effects at all, they are not worthy of mention – in either a positive or negative sense. This corresponds to the above-mentioned insignificance of bilingualism in its effects on school performance beyond the effects already associated with second language proficiency.

In addition to the usual factors that affect productivity, such as education and occupational experience, in particular, all that counts on the *labour market* is second language acquisition: any deficit here is associated with fewer chances for employment and assumption of employment and reductions in income. The losses in productivity associated with linguistic deficits play a central role here. However, there are also indications of the existence of (statistical) discrimination based on uncertainties regarding the applicants and on the restraint shown by applicants when it comes to the supply of labour, in particular if they have access to less profitable but more secure ethnic intervening opportunities, are embedded in exclusive ethnic networks and do not, therefore, have access to the relevant information. In the case of very large group sizes, these disadvantages arising from the availability of ethnic alternatives shrink, however they are not entirely compensated. The benefits arising from bilingual skills are insignificant as compared with the benefits that accrue from linguistic assimilation, with the exception of proficiency in English in addition to the relevant language of the receiving country. This also applies to (allophone) immigrants in Canada, whose disadvantages – not only in terms of language deficits – appear to be greater than those experienced elsewhere. The labour market effects of the Canadian policy of multi-lingualism are limited to the upgrading of French among the native population in the Francophone provinces.

In addition to the specified individual effects – and in accordance with the theoretical model –, some *interaction effects* between the different conditions can also be found empirically. In terms of *language acquisition* and *educational success*, ethnic concentrations in the living environment and in the classrooms assume a particularly important role. They lead to a mutual reinforcement with other negative conditions such as a more advanced age at migration or lower level of educational attainment by the parents. Conversely, those immigrants/immigrant children who are at a greater disadvantage benefit in particular from the improvement of individual conditions, for example a reduction in the ethnic concentrations in problematic living environments and school situations. However, if the schools and classrooms were to become more ethnically mixed, this would also involve the simultaneous loss of some advantages on the part of the better off native children. As the most important component of human capital for employment and income, education interacts statistically with language proficiency on the *labour market*. It appears to be the case here that, as with language acquisition and education, education and (second) language proficiency has a *cumulative* effect on employment opportunities and income: immigrants with better educational qualifications benefit in particular from the elimination of language deficits and even the best education is of little help in the case of poor language skills. Conversely, good language skills are inconsequential if the level of education is poor.

► **Mutual reinforcement of favourable and unfavourable conditions for integration**

As far as has been empirically tested, the findings for the different *receiving countries* – such as the USA, Australia, Canada, Israel, Germany – are *stable*, and, indeed, right down to the specificities of the described interaction effects and across special categories of immigrants, like immigrants who are eventually legalized following, in some cases, an extensive pre-history of illegality, refugees and temporary or transnational immigrants. Systematic

gender effects are not observed (after controlling for the background variables) and if any differences exist here, they are minimal. However, some stable differences are observed between certain *ethnic groups* which even do not disappear after controlling for the background variables. This applies, in particular, to the ethnic disadvantages of Mexican (and most other Latin American) immigrants, to the significant educational and labour market success of Asian immigrants in the USA and also to the relatively weak position of the Turkish immigrants in Germany. Conclusive explanations of such ethnic differences

► **Consistent correlations between language and integration for different groups of immigrants and different receiving countries have been validated empirically**

are not yet available. It is possible that very different circumstances or special combinations of circumstances come into play here, such as small geographical distances between the origin and host societies and the maintenance of transnational contacts, great linguistic, cultural and social distances,

large groups and ethnic enclaves, ethnic social capital in the form of familial social control or special value orientations towards educational and labour market success. However, these ethnic differences, which continue to exist and have been little explained up to now, do not change anything in terms of the fundamental processes.

In view of the complexity of the various aspects and correlations between “migration, language and integration”, the innumerable and often seemingly impenetrable contributions of varying quality from a very wide range of disciplines on the subject and the existence of a series of sometimes very heated controversies surrounding the issues involved, the convergence between the theoretical and empirical findings that emerges from this AKI Research Review 4 may seem surprising. Some of the findings presented are far from new, such as the enormous importance of education, age at migration and ethnic concentration for (second) language acquisition, while others are rather new, such as the almost complete absence of the effect of bilingualism on educational success and labour market placement. Overall, the observable empirical relations demonstrate the outstanding and – even in view of the greater transnationality of current migration processes – enduring significance of the institutional and cultural preconditions of the receiving country for the explanation of (intergenerational) integration and, moreover, in all of the four areas explored: i.e. second language acquisition, bilingualism, education and the labour market. As opposed to this, there are almost no indications that ethnic resources, such as the maintenance of the native language or access to ethnic networks, play a significant role when it comes to structural integration. Instead, ethnic bonds and relationships tend to hinder structural integration and can at best attenuate existing disadvantages in case that the relevant groups, ethnic enclaves and markets are large enough. On no account do they constitute a counterweight to ethnic stratification.

The fact that the empirical findings confirm almost without exception the assumptions and implications of the theoretical model of the social integration of immigrants, in general, and the associated model of language acquisition, in particular, further corroborates the reliability of the empirically observed relations, and this applies, moreover, to certain not necessarily obvious details, such as the interaction effects and the cumulative reinforcement of favourable and unfavourable conditions.

Four key data sets analysed in the AKI Research Review 4

CILS

The “Children of Immigrants Longitudinal Study” (CILS) is a major panel study consisting of three survey waves and intended to provide a basis for the study of the integration of second-generation immigrants in the USA. The topics covered by this study include language use, ethnic identity, school performance and, in the third survey wave, *inter alia* employment status, income, marriage and partnership, political and civil societal engagement. In 1992/93, over 5,000 ninth-graders in Miami/Fort Lauderdale (Florida) and San Diego (California) were interviewed, who were either born in the USA and had at least one parent who had been born abroad (in 77 different countries of origin) or had themselves migrated to the USA as young children. The second survey wave took place shortly before they completed high school in 1995 and was complemented by a survey of the parents of around half of the participating youths. A third survey wave was conducted (68% of the original sample) in 2002/03; at this stage the panel members were on average 24 years of age.

Further information may be obtained from Portes and Rumbaut (2001: xxi ff. and 287-347) and on the CILS website: <http://cmd.princeton.edu/cils.shtml>.

KITTY

The study *Kulturelle und ethnische Identität bei Arbeitsimmigranten im interkontextuellen und intergenerationalen Vergleich* (“Cultural and Ethnic Identity of Immigrant Workers in an Intercontextual and Intergenerational Comparison”) is a survey which was carried out in 1984 and in which Turkish and Yugoslav immigrant workers and equal numbers of their 15 to 25-year-old children (1846 respondents in total) were interviewed. The survey’s thematic focuses included *inter alia* ethnic identity, language skills, inter-ethnic friendships, school careers, gender-role orientation. The survey locations were Duisburg, Essen, Munich, Nuremberg and Hamburg. In order to facilitate the analysis of the effects of the respondents’ living environment on integration processes, the socio-ecological context was recorded on a small-scale basis, in that the sample was further stratified on the basis of districts (three per city) and individual accommodation units within them (two per district) and objective and subjective indicators of ethnic concentration were collected.

Further information can be found in Esser and Friedrichs (1990: 20 ff.) and on the website of the Central Archive for Empirical Social Research:

<http://info1.za.gesis.org/dbksearch12/SDESC2.asp?no=1580&search=Esser&search2=&DB=D>

PISA

The “Programme for International Student Assessment” (PISA) is an international school performance study carried out by the Organisation for Economic Co-Operation and Development (OECD) and its member states. The first of three survey cycles carried out in 2000 focused on the examination of the area of reading literacy, along with the mathematical literacy and scientific literacy, of 15-year-old pupils in a total of 32 states. The extended German national sample (PISA-E) in its publicly accessible form, which includes a total of 33,809 15-year-old pupils from 1460 German schools, provided the basis for the re-analyses conducted in this AKI Research Review 4. This sample allows for representative statements to be made also about young people with a migration background (i.e. who have at least one parent who was born abroad). In addition to the performance tests, questionnaires completed by the pupils, parents and school principles recorded numerous characteristics of the participating students and schools. The database, which is accessible to the public, does not provide information (*inter alia*) about the schools and basic cognitive skills (BCS), so that the author of this review was unable to examine the influence of these factors in his analyses.

Further information can be found in Baumert et al. (2002) and on the website of the Max Planck Institute for Human Development Berlin (MPI): <http://www.mpib-berlin.mpg.de/pisa/>

SOEP

The *Sozio-oekonomische Panel* (Socio-economic Panel) (SOEP) is a longitudinal survey which started in 1984 and is being carried out annually by the survey research institute TNS Infratest Social Research on behalf of the German Institute for Economic Research (DIW Berlin). The population of the survey is the resident population of the Federal Republic of Germany. The survey provides representative micro-data for households, families and individuals. In addition to the main areas of “labour market and labour participation” and “income”, the survey focuses on a series of other relevant areas of life such as health, housing, education and participation. The SOEP contains a disproportionately large sample of immigrants: Sample B, which has been included in the SOEP since 1984, contains data on immigrant workers from the Mediterranean states and Sample D has represented since 1995 immigrants who arrived in West Germany from the mid-1980s. Cumulative data are available for a total of around 7,400 individual immigrants and for a further 1,000 foreigners born in Germany for the period 1984 to 2002 (cf. Frick and Söhn 2005: 81).

Further information may be found in Wagner, Schupp and Rendtel (1994); Schupp and Wagner (2002) and on the website: <http://www.diw-berlin.de/english/sop/index.html>

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Programme on Intercultural Conflict and Societal Integration (AKI)

The AKI was established at the Social Science Research Center Berlin (WZB) in 2003 and is financed by the German Federal Ministry of Education and Research. The project consists of two researchers, a five-member Steering Group and an Advisory Committee, whose members include representatives from science and research, politics and the media.

Two fundamental considerations were crucial to the establishment of the AKI. Firstly, due to the varying and continuing migration movements in Europe, the cohabitation of people from different cultural backgrounds has become the norm, a situation that presents challenges and the potential for conflict, but also opportunities. Secondly, the AKI project assumes that social science research contains both highly developed theoretical models and comprehensive empirical evidence to analyse such problems and support political decision-making, but, that, for various reasons, optimum use is not made of these resources.

A central objective of the AKI is the problem-led systematic reporting of research findings collected by the different academic disciplines on selected issues in the area of intercultural conflict and societal integration. In this way, the AKI wishes to contribute to the further development of research and – as far as possible – offer bases for political action. The basic task of the AKI is to promote communication and cooperation between science, politics and the public in the thematic field of migration-integration conflict. The programme would like to contribute to the research area of intercultural conflict and societal integration, gaining a higher profile and becoming more visible at both academic and societal level.

The *AKI Research Reviews* are conceived as a contribution to developing suitable ways to enable the understanding and evaluation of complex bodies of knowledge in a reliable and condensed form, with a view to their political relevance. Such syntheses are increasingly important in light of a number of factors: the rise in and differentiation of scientific knowledge, ever more intensive links in international communication, the demand for an interdisciplinary orientation and, not least, the complexity of many of the problems faced by modern society. The AKI research reviews are intended to evaluate the information available on selected topics, differentiate between adequately substantiated hypothetical insights and controversial views, highlight information gaps and requirements, systematize scientific insights and hence provide bases for political action. The aim of the AKI is to provide scientific analyses on questions significant to society, that formulate their questions and interpretative approaches independently while also contributing to the resolution of political and societal problems.

In addition to the compilation of the research reviews, the activities of the AKI also include the organization of interdisciplinary expert workshops and the publication of the German language AKI Newsletter, published three times per year.

**Programme on Intercultural Conflicts and Societal Integration at the Social
Science Research Center Berlin**

Arbeitsstelle Interkulturelle Konflikte und gesellschaftliche Integration (AKI)
am Wissenschaftszentrum Berlin für Sozialforschung (WZB)

Publications

Miles Hewstone, *Neuere Forschungen über Intergruppenkonflikte: Konsequenzen für den Umgang mit Migration und Integration*, WZB-discussion paper Nr. SP IV 2004-601, Berlin 2004.

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Janina Söhn, *Zweisprachiger Schulunterricht für Migrantenkinder. Ergebnisse der Evaluationsforschung zu seinen Auswirkungen auf Zweitspracherwerb und Schulerfolg*, AKI-Forschungsbilanz 2, Berlin 2005. [Summary in English available online]

AKI, *Migrationshintergrund von Kindern und Jugendlichen: Wege zur Weiterentwicklung der amtlichen Statistik*, Band 14 der Reihe Bildungsreform des Bundesministeriums für Bildung und Forschung, Berlin 2005.

Karen Schönwälder, Janina Söhn, Ines Michalowski (unter Mitwirkung von Katarina Löbel), *Sprach- und Integrationskurse für MigrantInnen: Erkenntnisse über ihre Wirkungen aus den Niederlanden, Schweden und Deutschland*, AKI-Forschungsbilanz 3, Berlin 2005. [Summary in English available online]

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