Bilingualism and Code-Switching:
A Case Study of a Bilingual Family

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To Him who works in me, both the willing and the working, thank you!

To my parents who raised me, support me, encourage me and pray for me, thank you!

To my brothers and sisters, thank you for being more than family but also friends!

To Julia, my love, who has my back and loves me no matter what, thank you!

To Simon, my son (and hopefully soon to your siblings), may you grow up to switch code like your daddy and mommy!
Example of late 1st-century literary code-switching

And Jesus turned and saw them following, and said to them, “What do you seek?” They said to Him, “Rabbi (which translated means Teacher), where are You staying?” [...] He found first his own brother Simon and said to him, “We have found the Messiah” (which translated means Christ). He brought him to Jesus. Jesus looked at him and said, “You are Simon the son of John; you shall be called Cephas” (which is translated Peter).

(Gospel of John, Chapter 1, Verses 38, 41 & 42; New American Standard Bible; translation provided by the author; emphasis added by me.)
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Die vorliegende Arbeit wurde bisher in gleicher oder ähnlicher Form noch nicht als Diplomarbeit eingereicht.

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Abstract

This thesis represents a study of code-switching as it occurs in the language production of bilingual speakers. The paper provided the theoretical framework for the subsequent case study. The first step was to define bilingualism and to elaborate on it by making essential distinctions and dealing with some of the significant issues that arise when studying bifurcators. The second theoretical chapter focussed on the resulting language contact phenomena. It emphasised linguistic code-switching, which is discussed from the various perspectives of multiple linguistic disciplines. In the case study, the theory was implemented to analyse transcripts of a bilingual family’s conversations. Instances of code-switching were presented in a brief numeric summary. The analysis of examples for code-switching as well as other types of language contact phenomena showed that the participants mainly code-switched single words from German into English, primarily nouns. However, switched verbs emerged as the most interesting part of speech. They were incorporated into the English sentences in a creative manner which reflected the participants’ Austrian language background. Some interferences were discovered, however, the data show a higher number of loan-shifting. Code-switched and loan-shifted items were generally well integrated into the base language. The final chapter dealt with the effective use of code-switching in both foreign language and Content and Language Integrated Learning classrooms. It called for the judicious use of code-switching. Finally, it suggested several functions of code-switching for language teaching, discussed their advantages, and provided an in-depth example of employing code-switching strategies.
Zusammenfassung

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1. Introduction

Bilingualism can be part of an entire society’s makeup, for instance in countries with two official languages, and can appear in minority language groups or at an individual level. Some researchers estimate that as much as half of the earth’s population is bilingual. Naturally, this percentage depends on whom the definition includes as being bilingual, which is the first topic of the theoretical background. The theme is continued by distinguishing aspects such as types and degrees of bilingualism, followed by a chapter on language mode and how an individual becomes bilingual. After dealing with the question of how multiple languages are stored and a survey of advantages and disadvantages of bilingualism, the first half of the theoretical background will be rounded off with possible ways of raising children in two languages.

Whenever languages congregate, there is inevitably some overspill. For instance, the author sometimes simply prefers the adjective *frech*, the verb *schimpfen* and the noun *Ungustl* to their English counterparts, that is, if he can even come up with any. One language influences the other and vice versa. The resulting language contact phenomena are the topic of the second theoretical chapter. In particular, it will present code-switching, with an emphasis on grammatical, neuro- and psycholinguistic, and the sociolinguistic aspects of code-switching, followed by short chapters on language interference and borrowing.

After providing the theoretical framework, the case study will be introduced. The data contain transcriptions of recorded conversations. The participants are all members of an English/German bilingual family. The research questions revolve around the frequency and use of language contact phenomena with a focus on linguistic code-switching. A detailed analysis will reveal which types of code-switching the participants use, how they incorporate them into the structure of individual utterances and whether a specific trigger initiates the code-switch. In some cases, there may not be a definite reason for code-switching. A further step identifies borrowing and loan translations and ex-
plains their shift into English conversation. The final area of interest concerns instances of linguistic interference, i.e. transferences from the German language to English which are then incorrect.

The last chapter will appeal to bilingual teachers to include CS in the classroom. Precepts for the judicious use of CS will lay the groundwork for useful ways in which CS can be employed to their own advantage, but especially to the pupils’ benefit. An in-depth example will demonstrate the added flexibility of CS and will illustrate how CS can benefit the pupils learning progress. The final subchapter broaches the issue of first language use in Content and Language Integrated Learning.
2. Theoretical Background

2.1. Bilingualism

For many people, bilingualism (BL) has negative connotations. For instance, many believe that child bilingualism can have severe cognitive disadvantages leading to semi-lingualism in both languages. However, this view has long since been retired by research, to be replaced by the view that bilingualism does not mean loss; indeed, some have argued that increases in linguistic repertoire correlate with heightened sensitivity, enhanced cultural awareness, perhaps even greater cognitive flexibility and all-round nous. (Edwards 2003: 28)

According to some current definitions of BL, more than half the world’s population is bilingual, and many of the skeptics mentioned above may even be bilingual or multilingual themselves (e.g. Ansaldo et al. 2008: 540).

Before addressing the definition of BL, it is reasonable to clarify the terminology, in particular why the term ‘bilingualism’ is used and not ‘multilingualism’. After all, most of the participants in the following case study have some degree of proficiency in more than two languages (cf. 3.2.). From a theoretical point of view, BL is considered to be the most common form of multilingualism (Herdina and Jessner 2002: 52). Additionally, on a more practical level, the participants only have two languages in common, English and German. The data on hand also consist of only these two languages and therefore, whatever contact phenomena occur are confined to two languages as well.

2.1.1. Definitions of Bilingualism

The long history of research in this area of linguistics has resulted in a wide range of definitions of BL and the bilingual individual. Some views are rather narrow and tend to be exclusive regarding who is considered bilingual. On the other hand, there are very inclusive definitions that are open to more individuals. Between these two, many more approaches try to balance out some of the issues that arise from extreme positions.
Leonard Bloomfield (1935), one of the first linguists to write on the subject, provides an early definition of BL. In his voluminous monograph entitled Language, he works his way towards a description of BL by pointing out that, it is hard to measure the degree to which a language learner has mastered the target language. Therefore, an unbalanced learner can be classified as being “a foreign speaker of a language” (1935: 54). He contends that learners of a foreign language, for instance, immigrants, often experience a language shift towards the second language (L2). In many cases their first language (L1) undergoes language attrition, the result being that they are proficient in neither language. Bloomfield declares that the language learner who is “indistinguishable from native speakers round him” is an “extreme case of language learning” (1935: 55). He goes on to define bilingualism as the “native-like control of two languages” (1935: 56). According to the definitions mentioned above, this one is at the exclusive end. It includes only such individuals for whom the learning of a foreign language “is not accompanied by loss of the native language” (1935: 55-56). The question that arises, however, is how ‘native-like control’ is to be understood, though a digression into that topic may be going too far at this point.

In his book on The Norwegian Language in America, Einar Haugen (1953) moves away from this narrow definition. While he holds that a “smattering of language learning” in a second language does not yet constitute BL - he calls this pre-bilingualism - he does lower the bar from Bloomfield’s high requirements (1953: 6). According to Haugen, BL begins “at the point where the speaker of one language can produce complete, meaningful utterances in the other language” (1953: 6-7, emphasis added by me). Bilinguals can then develop their language skills to various levels, up to where they cannot be distinguished from native speakers.

Five years later Charles F. Hockett (1958) published A Course in Modern Linguistics. He introduces the concept of semi-bilingualism, a category of its own next to BL. It entails receptive bilingualism and productive monolingualism, i.e. an individual’s ability to understand a second language without being
able to speak it. Therefore, if both communicating parties of two languages are semi-bilingual in opposite directions, mutual intelligibility is ensured (1958: 327).

An even broader definition was put forward by A. Richard Diebold in an article first published in Language in 1961. According to his theory of incipient bilingualism, anyone with very little proficiency in a second language is bilingual. He stipulates that an individual’s mere “contact with possible models in a second language and the ability to use these in the environment of native language” (1961: 111) suffice for him or her to be classified as a bilingual, e.g. a receptive bilingual as described below.

William F. Mackey presented a further step in defining or redefining BL. From a brief overview of the various definitions of BL, he shows how “the point at which a speaker of a second language becomes bilingual is either arbitrary or impossible to determine” (1972: 555). This relative approach to BL leads him to extend his definition to the use of two or more languages. Thus Mackey considers “bilingualism as the alternate use of two or more languages by the same individual” (1972: 555). His concept of BL includes four different levels of interest: degree, function, alternation, and interference. The degree reveals how proficient the bilingual is in the respective languages. The question of the function takes a closer look at the uses to which a person puts language. Alternation is concerned with the degree, conditions, and manner of alternating between the two languages. Finally, the question is raised, to which extent a bilingual keeps his or her languages separate and how they influence each other (1972: 555-556).

2.1.2. Distinguishing Bilingualism

When dealing with the study of bilingualism one will inevitably come across several distinctions that linguists have made, with the goal of making the subject more manageable and approachable. While some achieve this goal and are helpful, others have become the topic of discussion as they often muddy the waters or are, in turn, superseded by more recent theories and research. The
following chapter distinguishes several types and degrees of bilinguals and bilingualism.

2.1.2.1. Types of Bilingualism

Firstly, one must separate **societal** bilingualism from **individual** bilingualism. The former refers to the reality that bilinguals are usually not on their own but rather reside within bilingual language communities. Sebba defines the broad term of societal bilingualism as “any kind of bilingualism or multilingualism at a level of social organisation beyond the individual or nuclear family.” (2011: 445). The term **diglossia** applies to the context of societal bilingualism, especially in the case of a minority language community within a majority language context. On the other hand, individual bilingualism, as the term itself suggests, applies to an individual’s possession of two languages (Baker 2011: 2).

The distinction between **endogenous** and **exogenous** compares a bilingual’s two languages to the social environment. Endogenous bilinguality occurs when the bilingual’s languages are both present in surrounding speech communities. In contrast, the term exogenous bilinguality expresses that only one of the speech communities are present (Hamers & Blanc 2000: 29).

Another issue that arises when categorising bilinguals is the age at which they acquire their languages. **Simultaneous** bilingualism occurs in cases where children learn and are surrounded by both languages from birth. However, if the child learns the second language after the age of three, the descriptor **consecutive** or **sequential** bilingual applies (Baker 2011: 3). Both simultaneous and sequential bilinguals participate in the case study and separate chapters examine these topics below.

The dimension of cognitive organisation is closely related to the age of acquisition. A **compound** bilingual has a single concept for a word in both languages. For example, an English/German bilingual assigns one set of meanings for the words ‘dog’ and ‘Hund’ and ties it to only one concept. A **coordinate** bilingual has one concept for the word ‘dog’ and one concept for the word
‘Hund’ (Weinreich 1968: 8-11). However, both types of cognitive organisation can be present in a bilingual’s cognitive system at the same time. Hamers and Blanc emphasise this by pointing out that there is not necessarily a direct link between the age of acquisition and cognitive organisation. They hold that the distinction is not absolute but that different forms of bilinguality are distributed along a continuum from a compound pole to a coordinate pole: a bilingual person can at the same time be more compound for certain concepts and more coordinate for others. (2000: 27-28)

An individual’s cognitive organisation may also change over time, from compound to coordinate, which has caused some to call the usefulness of the distinction into question (Harding-Esch & Riley 2003: 42).

When looking at the reason for learning a second language (L2), one finds that there are those who learn a language out of necessity and those who choose to do so for other reasons. Members of the first group are circumstantial bilinguals. They include, for instance, immigrants whose first language (L1) is not sufficient to function in everyday life in the new environment. Elective bilinguals, the second group, usually learn a language in a classroom setting (Baker 2011: 4).

Table 1 lists the four language abilities or skills that are distinguished. Listening and reading are receptive skills while speaking and writing are productive.

<table>
<thead>
<tr>
<th></th>
<th>Oracy</th>
<th>Literacy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Receptive skills</strong></td>
<td>Listening</td>
<td>Reading</td>
</tr>
<tr>
<td><strong>Productive skills</strong></td>
<td>Speaking</td>
<td>Writing</td>
</tr>
</tbody>
</table>

Table 1: The four basic language skills (Baker & Wright 2017: 7)

Classifying someone as being monolingual because they cannot write in a second language would be overly simplistic. An individual can very well be a passive or receptive bilingual who understands spoken and written discourse in L2 without being able or not choosing to produce utterances. Furthermore, someone who can communicate orally in a second language, i.e. she possesses
the skills of listening and speaking, is an active or productive bilingual, even if she is not literate in L2. These simple examples show that it is not an easy task to categorise bilinguals, as there are several dimensions of the language ability, and the individual’s proficiency in each separate skill has to be taken into account (Baker & Wright 2017: 7-8; Edwards 2013: 13).

2.1.2.2. Degree of Bilingualism

Similarly, the degree of competence in L2 has been a topic of dispute among linguists. The question is, when someone is still considered to be monolingual and where the threshold to bilingualism is. Two extreme approaches will exemplify the dilemma. On the one end of the scale, one finds the maximalist approach as we have already seen Bloomfield define it. It stipulates that the speaker must have native-like proficiency in both languages to be bilingual. The opposite thereof is the minimalist view as seen in Diebold’s definition, which in effect does not state a minimal proficiency but instead describes the early stages of language contact (Romaine 1995: 10-11). Whereas maximal bilingualism includes relatively few individuals, the minimal view can become too inclusive for practical application in research. This polarity clearly shows how difficult and often arbitrary the definition of the cutoff between mono- and bilingualism can be. Additionally, Valdés stipulates that bilinguals find themselves on a continuum between language A and B. He illustrates the transition with font-size and case which indicate proficiency and the dominant language, respectively.

<table>
<thead>
<tr>
<th>Language A</th>
<th>Language B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monolingual</td>
<td>Ab Ab Ab Ab AB AB aB aB aB aB aB aB aB aB aB aB aB aB Monolingual</td>
</tr>
</tbody>
</table>

Figure 1: The bilingual continuum (Valdés 2003, cited in Baker & Wright 2017: 8)

Even if one found a suitable method for evaluating the proficiency of the languages, the results are elusive because the bilingual is in a constant process of language gain and loss. It becomes evident that the criteria must be expanded. Baker’s suggestion is to look at how an individual uses the two languages in
everyday situations rather than try to determine language competence as a criterion, as seen in Figure 2. Thus the complexity of a bilingual’s language proficiency becomes more tangible.

<table>
<thead>
<tr>
<th></th>
<th>Language A</th>
<th>Language B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context 1</td>
<td>Monolingual  Ab Ab Ab Ab AB AB aB aB aB aB</td>
<td>Monolingual</td>
</tr>
<tr>
<td>Context 2</td>
<td>Monolingual  Ab Ab Ab Ab AB AB aB aB aB aB</td>
<td>Monolingual</td>
</tr>
<tr>
<td>Context 3</td>
<td>Monolingual  Ab Ab Ab Ab AB AB aB aB aB aB</td>
<td>Monolingual</td>
</tr>
<tr>
<td>Context 4</td>
<td>Monolingual  Ab Ab Ab Ab AB AB aB aB aB aB</td>
<td>Monolingual</td>
</tr>
<tr>
<td>Etc…</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 2: Complexity of bilingual language proficiency (Baker & Wright 2017: 8)

A further controversial issue regards balanced bilinguals, who are usually defined as individuals whose proficiency in two languages is nearly the same. However, it has been pointed out that in many cases this is an idealised concept. It is rare that a person uses both languages in a large variety of contexts and “[t]he capabilities of most of those who may reasonably be styled as ‘bilingual’ fall well below any line of equivalence” (Edwards 2013:13). Usually, the respective languages are used in specific contexts, for a particular purpose and with a certain set of people. Additionally, the term does not shed any light on the level of proficiency an individual has attained in the two languages, but merely that they are equivalent. To broaden the definition, linguists have gone beyond the literal meaning of balanced to include an implicit notion that extends to bilinguals with the “‘appropriate’ competence in both languages” (Baker 2011: 9). In doing so, however, they raise additional questions: What exactly is the appropriate competence and how can it be measured?

2.1.2.3. Bilingual and Bicultural

In addition to the linguistic side of bilingualism, cultural aspects are also of interest. As Baker mentions, when individuals acquire a second language, they do not learn only the language by itself but also attain a certain level of bi-
culturalism or multiculturalism. Depending on the learner’s integration and assimilation into the respective culture, a higher or lower degree of bicultural competence can be observed (Baker 2011: 4).

In his article “Bicultural Bilinguals” Grosjean (2014) remarks on how bilingual and bicultural are often mentioned in the same context but points out that there is very little written, “to encompass them into one reality, bicultural bilinguals” (2014: 572). While his paper focuses on bicultural bilinguals, Grosjean begins by clarifying the fact that the one does not automatically include the other. Bilinguals are not necessarily bicultural. For instance, diglossic communities are often part of one culture encompassing two or more languages. The inverse is also possible when a person becomes bicultural but remains monolingual, for instance, by moving to another country where the same language is used (2014: 572-3).

Among the few existing definitions of a bicultural person, the dichotomy of fluency and use stands out. Fluency describes cultural competence or knowledge while use refers to interacting with multiple cultures. While others stipulate that “biculturals have two distinct and complete sets (our italics) of knowledge structures, one for each culture”, Grosjean focuses on use. He puts forth three traits that characterise biculturals:

Firstly, they take part, to varying degrees, in the life of two or more cultures. Secondly, they adapt, at least in part, their attitudes, behaviours, values, languages, etc., to these cultures. Thirdly, they combine and blend aspects of the cultures involved. (2014: 575)

Although the different cultures converge to a certain degree and biculturals may find it difficult to determine the origin of a given cultural aspect, it is unlikely for two cultures to take the same significance in their lives. Grosjean, therefore, introduces the concept of cultural dominance (2014: 575).

2.1.2.4. Holistic View of Bilingualism

In his book Studying Bilinguals Grosjean (2008) discusses several approaches regarding BL. Firstly, he deals with a monolingual or fractional view
of BL and the bilingual person. He criticises the idea by pointing out several problematic issues that had been prevalent in bilingual research. Grosjean states that

[a]ccording to a strong version of this view, the bilingual has (or should have) two separate and isolable language competencies; these competencies are (or should be) similar to those of the two corresponding monolinguals; therefore, the bilingual is (or should be) two monolinguals in one person. (2008: 10)

He ascribes this notion of teachers, researchers and even laypersons to their underlying assumptions that monolingualism is the norm. This opinion inevitably induces them to evaluate bilinguals as being fractional, while neither modifying the methods nor the interpretation of data in bilingual research (2008: 10).

Grosjean identifies several consequences of the monolingual approach, some of which are briefly mentioned here. First, bilinguals are often gauged by how proficient they are in their respective languages and by how balanced their proficiencies are. Thus researchers were in search of a pure bilingual that is fluent - howsoever fluency is then defined - in both languages. Others were defined as being “neither monolingual nor really bilingual” (2008: 10-11). Furthermore, Grosjean criticises the faulty assumption that language skills of bilinguals can be properly evaluated by using monolingual standards. The problem that arises from employing such tests is the disregard of the bilingual’s different proficiency levels. Besides, they do not take the needs and social functions of the respective languages into account, i.e. “what a language is used for, with whom and where” (2008: 11). Another repercussion of the fractional view is the notion that bilinguals should always keep their languages separate, as they are perceived to be two separate monolinguals. Resulting contact phenomena like borrowings and code-switching are therefore seen as being accidental and the result of sloppy speech. This focus on two distinct language systems that do not or should not intermingle had lead researchers to focus on only one language and to neglect, for instance, the ramifications that the acquisition of a second language has on the first. Finally, the monolingual view has influenced bilin-
guals themselves. As a result, they often underestimate their own language skills or try to hide their second ‘weaker’ language (Grosjean 2008: 10-13).

The alternative Grosjean offers to the monolingual approach, is a bilingual or holistic view of BL. He suggests that a bilingual not be viewed as being made up of two autonomous monolinguals but rather as an integrated whole. In the same manner, the languages of a bilingual speaker are not viewed separately as distinct language systems. Instead “[t]he co-existence and constant interaction of the two languages in the bilingual has produced a different but complete language system” (2008: 13-14). This complex system is developed uniquely in each bilingual depending on the purpose and domain of each language, i.e. which language is used with whom and to what end. The levels of proficiency may differ strongly, a constellation which is found more often than completely balanced language skills. Accordingly, monolingual approaches cannot determine bilinguals' language competence. The entire language repertoire must be considered (2008: 14). Garcia and Li Wei round off this concept by explaining that “dynamic bilingualism suggests that the language practices of bilinguals are complex and interrelated; they do not emerge in a linear way or function separately since there is only one linguistic system” (2014: 14).

The holistic view inevitably leads to new perspectives on bilingual research, a selection of which is discussed below. On a basic level, the comparison of monolinguals to bilinguals will change substantially towards a fairer assessment of the bilingual’s language skills, taking into account such matters as the structure and organisation of the bilingual’s competencies in both languages as well as in the mixed language. A further area of interest that arises is the study of language learning and language attrition in bilinguals. Another theory regards the possibility of a person shifting entirely from one language to another, with one language increasing while the other decreases. An additional facet that is expanded by the holistic approach to BL is the bilingual’s speech or language mode that changes depending upon the particular situation. The mode ranges from monolingual in either language, when engaged with a monolingual coun-
terpart, to a bilingual language mode in which both participants speak both languages. The bilingual mode is of particular relevance to this study and is discussed in depth, as it involves the mixing of languages, i.e. code-switching and borrowing (Grosjean 2008: 13-19).

2.1.3. Language Mode

Bilinguals who are mindful of their language use, regularly describe an awareness of changing the way they communicate when they are in conversation with monolinguals and when they speak to bilinguals. In a monolingual setting, they will adhere to the shared language to accommodate their interlocutor. In this case, their L2 remains dormant. When conversing with other bilinguals, however, they may call upon their L2 by using single words or sentences or even switch entirely. This experience is not limited to their productive language but also on a receptive level. For instance, they may be expecting a monolingual setting and be surprised when spoken to in a second language, even if they can understand it perfectly. Though these reports may be of an anecdotal nature (Grosjean 2008: 37), they nevertheless lead to the phenomenon of language mode, as put forward and developed by Grosjean (1998, 2001). Grosjean and Li define language mode as “the state of activation of the bilingual’s languages and language processing mechanisms at a given point in time” (2013: 15). Figure 3 shows the processes involved in determining one’s language mode in a given situation. According to the model, bilinguals ask themselves, often on a subconscious level, “Which language should be used?” and “Should the other language be brought in?” (2013:15-16). To simplify matters, they have chosen to illustrate the process with only two languages, though they apply the principle to more languages as well.
The starting point is that language a (La) and language b (Lb) are both inactive, here shown as the squares with diagonal lines. The bilingual then has to answer the first question by determining which language to use. In the example, the bilingual chooses La, which then becomes activated and changes into a black square. This first step is called language choice, and the selected language designates the base language (Grosjean & Li 2013: 14). The chosen language is not necessarily the bilingual’s L1, it is, however, “the most active in terms of environmental activation [...] while the other non-target language is much less activated (but never totally deactivated)” (Yu & Schwieter 2018: 1).

The answer to the second question, “Should the other language be brought in?”, determines whether the second language remains inactive or if it is activated. If the answer is ‘no’, as shown on the bottom left of the diagram, Lb remains deactivated, and the bilingual stays in the monolingual language mode.
Examples for the monolingual mode do not only include conversations but also reading a book or watching TV in only one language. If the answer, however, is ‘yes’, then Lb is activated to a lesser degree than the base language, as seen at the bottom right of the figure. The bilingual is then in bilingual language mode and can introduce elements of Lb, e.g. by borrowing or code-switching, as seen later, or can switch the base language to Lb entirely (Grosjean & Li 2013: 18). This mode is not limited to speech but also includes listening to a bilingual radio station, interpreting between two monolinguals, reading a newspaper with original quotes in Lb, etc. (Grosjean & Li 2013: 15-16).

Grosjean and Li point out that the monolingual and bilingual language modes are at the far ends of a continuum. In a variety of everyday interactions, bilinguals will find themselves on different points of the scale. Thus bilinguals are not limited to either the monolingual or the bilingual mode but can also be in an intermediary language mode. For instance, two bilinguals may choose to interact in only one language in a particular context even though they share both languages (2013: 15). They then go on to say that “bilinguals may differ from one another as to how much they move along the language mode continuum”, depending on the environmental characteristics (2013: 16). This movement can be very sudden and can take place at any time. However, it can only take place in the bilingual mode and is “something that simply can’t happen in a monolingual mode” (2013: 17).

Yu and Schwieter add to the discussion by pointing out in their article on possible effects of language mode on the cognitive advantages of bilingualism, that the “participants’ characteristics including language proficiency and language dominance may change the activation level of languages” (2018:2). They thereby add a bilingual’s language background to the situational context of language mode choice. Wu and Thierry, however, call for caution when studying the effects that mixed language conditions have on language processing. They point out that, “unless it is controlled or deliberately manipulated, language context is a potentially confounding variable when examining the selectivity of
language processing in bilinguals because it is closely related and critical to the theoretical issue under investigation” (2010: 2).

2.1.4. Development of Bilingualism

After distinguishing different aspects of bilingualism as well as gaining some insight into the bilingual’s mental processes of choosing and reevaluating language mode, the question of how one becomes bilingual arises. There are numerous routes for a person to become bilingual or multilingual and they all are influenced by such factors as personal, social, political, psychological, and educational circumstance. The two most basic distinctions, however, are the time and the mode of becoming bilingual. One person may begin acquiring two languages at birth, for instance, because her parents speak two different languages, while another begins at a much later stage in life, for instance, after deciding to move to another country. As to the mode, the traditional distinction is made between **language acquisition** and **language learning**. Yule distinguishes them as follows:

The term acquisition is used to refer to the gradual development of ability in a language by using it naturally in communicative situations with others who know the language. The term learning applies to a more conscious process of accumulating knowledge of the features of a language, such as pronunciation, vocabulary and grammar, typically in an institutional setting, with teachers. (2014: 187)

In short, the former is informal and implicit while the latter is formal and explicit, though a strict separation of the two is often not possible and in some cases not desirable. In our examples, the child begins acquiring two languages through language contact in the home and neighbourhood without formal instruction. The adult, on the other hand, begins learning her second language formally by attending language classes. Later she acquires a deeper understanding of its use in various situations through immersion in the second language and culture (Baker 2011: 93-94).
2.1.4.1. Early Development of Bilingualism

In childhood bilingualism, the first distinction is between simultaneous and sequential childhood bilingualism. Simultaneous childhood bilingualism, also termed infant bilingualism, bilingual acquisition and bilingual first language acquisition (BLFA), refers to a child acquiring two languages simultaneously from birth. This is the case when, for example, a child is exposed to two languages in the home, i.e. the parents communicate with the child in separate languages (Baker 2011: 94; Silva-Corvalán 2014: 1). As the process of acquisition of both languages is happening at the same time, De Houwer joins Wölck in preferring ‘Language A’ and ‘Language Alpha’ over ‘first language’ and ‘second language’. The latter designations may be misconstrued as specifying a temporal succession or value (De Houwer 2009: 1-4, cf. Wölck 1987/1988).

There is no exact age separating simultaneous from sequential bilingualism. However, in the case of the latter, a child acquires or begins to acquire one language and is exposed to another language at a later time. Paradis describes sequential bilingual children as “typically speaking their first language (L1) language [sic] at home with both parents, and their second language (L2) at school” (2007: 15). Further distinctions are made based on when the acquisition of a second language commences. Successive bilingualism develops when a child begins to be exposed to a second language between the first and third birthdays. Early second language acquisition is when one language is already established before the child is regularly exposed to a second language, usually at an age between 18 months and four years. The low end of this range roughly reflects an age when many children raised in a monolingual manner begin to gain more access to situations which introduce them to a second language, e.g. in daycare facilities. The high end represents the age before children enter preschool where they begin to learn to read. In many countries, this is at around age five. If a child’s induction into a new language commences in the context of a literacy program, we move into the domain of formal second language acquisition (De Houwer 2009: 4; Baker 2011: 94-95).
2.1.4.2. Later Development of Bilingualism

There is no consensus on the age at which the category of early development of bilingualism ends, and it may seem arbitrary to introduce a new heading on later development at age 4-5. The question is if the age of onset of second language acquisition (SLA) has a significant effect on the results? Butler approaches this question by separately examining the effect that the age of onset has on the route of acquisition and the rate of acquisition, as well as the ultimate attainment of L2 proficiency. Her review of these matters reflects mixed results and differences of opinion in all three areas (2013: 122-126). Although she points out that his argument may only hold up for specific domains, Butler does give some attention to Meisel’s tentative classification. He proposes an age range for child L2 learners – ages 3-4 to 7 at the age of onset – and adult L2 learners – ages 8 and older (2008: 59). Meisel suggests that these “groups show qualitatively different routes of acquisition as well as ultimate attainment” (Butler 2013: 122; cf. Meisel 2008: 54). This terminology also indicates a shift from informal language acquisition to structured language learning beginning at the preschool age.

Penfield and Roberts studied the interrelation of age and ultimate attainment of L2 proficiency as early as 1959. They developed the critical period hypothesis, which is “generally understood as being a limited developmental window during which native-like language attainment is possible.” (Butler 2013: 123). They claim that, up until the age of 9 years, “the child’s brain has a specialized capacity for learning language” (1959: 240). Lenneberg later promoted the hypothesis and added that “[f]oreign accents cannot be overcome easily after puberty” (1967: 176). Attempts to explain this phenomenon include the completion of lateralisation, changing brain chemistry at the onset of puberty, the decline of an individual’s language making capability, etc. There is much discussion about whether such a period exists, when it begins and ends, and how well defined the decline of L2 acquisition is after the critical period. The result is a sea of conflicting evidence, which is not surprising, given the large
variety of methodologies employed in the respective studies. In a more recent review, Meisel concludes that critical period effects “characterize both first and second language acquisition. They do not, however, affect ‘language’ as a whole but only certain domains of grammar” (2013: 85, emphasis added by the author). He goes on to say, that a single critical period that affects all aspects of grammatical acquisition at the same time is not plausible. Meisel, therefore, supports the idea of sensitive phases and critical periods, the latter representing a “cluster of sensitive phases characterised by an optimal period for the acquisition of one out a set of grammatical phenomena” (2013: 85).

An additional domain that is very difficult for late L2 learners to master is phonology. Some linguists purport that an individual may reach a high degree of L2 proficiency in most domains without ever achieving native-like pronunciation. Supporters of this theory often refer to the Joseph Conrad effect, by pointing out that, while Conrad’s English writings prove a high degree of proficiency, he never lost his strong Polish accent when speaking English (e.g. Yule 2014: 188). Lenneberg emphasises the causality between foreign accent and age of onset after 9 or 10. Others disagree with him and the critical period hypothesis by producing data of older language learners that outperform children. It becomes evident, however, that age of onset alone is not the only relevant factor. The age of arrival in the L2 environment, as well as the length of exposure, significantly influence the ultimate attainment (Moyer 2004: 22-24). In earlier writings Moyer lists additional variables besides the age of acquisition that should be taken into account when predicting the phonological outcome of SLA. She includes “motivation, cultural empathy, desire to sound like a native speaker, and type or amount of input” (1999: 94). In his overview, Birdsong (2006) comes to a similar conclusion. He names several studies that indicate, that nativelikeness across a broad range of domains is possible (2006: 19-21). However, he points out that “those learners who are taken for natives by native judges tend to be those with high levels of L2 practice, motivation to sound like a native, and L2 phonetic training” (2006: 20). In light of the above named contributing factors, the “grow-
ing interest in viewing language acquisition as a *complex and dynamic system*” (Butler 2013: 110; italics added by the author) seems reasonable and opposes the strict categories of implicit language acquisition and explicit language learning, as mentioned on page 16.

One of the significant advantages of SLA is that learners can build on a previously acquired foundation. Learners already have linguistic awareness. They have an idea of the structure of one language, and they have already mastered the difficulty of uttering complex ideas. This foundation can be invaluable when learning another language, especially if these languages are similar. Some structures from L1 may follow the same principles in L2, and positive transference can facilitate SLA. Conversely, false assumptions can interfere with the correct form in the target language, e.g. false friends or incorrect word order. However, the advantages of transference outweigh possible interference, even more so in third language acquisition (Matras 2009: 72).

We have seen that there are differences in outcome between early bilingual acquisition and adult SLA, though they may not be as pronounced as some have claimed. After a certain age, native-like proficiency seems to be especially hard to attain in the domains of grammar, morphology and phonology. For some learners, these disadvantages can be overcome with a high degree of motivation, effort, and training. Conversely, early acquisition of two languages may be an advantage but does not necessarily lead to fluent, stable, and balanced bilingualism in adulthood (Montrul 2013: 14).

### 2.1.6. One or Two Language Systems?

As discussed above, bilingual first language acquisition occurs when children begin to acquire two languages simultaneously from infancy. As they grow older, children go through a time of language mixing, which leads to the question of whether a child’s language systems are initially mixed or if they develop two independent language systems from the beginning. The resulting opposing views are known as the Unitary Language System Hypothesis and the Inde-
pendent Development Hypothesis. A period of early mixing is not called into question. Therefore, the majority of studies focus on the amount of mixing and the change in mixing rates in the course of a child’s development. In her short review, Albrecht (2006) concludes, that most researchers agree that bilingual children can separate languages at an early age. Studies suggest that they develop linguistic awareness even before acquiring metalinguistic terms, show a growing pragmatic competence, and are aware of expected language choice at an age as early as two years. Increased mixing at a later date can be attributed to the acquisition of code-switching strategies that also reflect a child’s ability to differentiate between a monolingual and a bilingual setting. In addition to a child’s age and linguistic level, the parents also play a decisive role in developing an awareness for separate languages. Some parents may highlight the different languages by correcting mixed utterances while others may code-switch themselves and not employ any explicit instruction (2006: 34-37).

2.1.7. Advantages and Disadvantages of Bilingualism

In the previous chapter, it became clear, that early bilingualism affects developing minds. The assumption that influenced a prevailing negative attitude toward BL was founded on the belief that children became confused when learning two languages and would be less intelligent (Eberhaut 2015: 15; Bialystok et al. 2012: 240). This view is not uncommon even today. Kirsch (2012), for example, reports this in his study on bilingual upbringing and illustrates this with the following cases,

I took my child to the baby-clinic and the social worker heard me speak Luxembourgish to Tom. She told me immediately that they had a special service to help bilingual children overcome language problems. (Mother D quoted in Kirsch 2012: 105)

Alex spoke late and everybody said it was because he was a boy and bilingual. Several suggested that I stop speaking Luxembourgish. (Mother E quoted in Kirsch 2012: 105)
These myths may be founded on prejudice and negative attitudes towards immigrants, however, the question of adverse effects of child bilingualism should not be discarded entirely.

Though research today may not end in claims as broad as ‘confusion’ and ‘lesser intelligence’, studies nevertheless show a disadvantage for bilingual children in specific areas. For instance, in a study of bilingual children under the age of 3, Saur et al. (2009) report results that demonstrate a lower proficiency in both languages (2009: 167). In their review, Bialystok et al. refer to studies showing a smaller vocabulary in bilingual children and an apparent inability to make up for the smaller lexicon later in life (2012: 241). Several studies focusing on lexical retrieval by employing picture naming tasks indicate greater response latencies. For instance, findings revealed by Sadat et al. show longer onset latencies in bare noun as well as noun phrase production when comparing bilinguals with monolinguals (2012: 168-170).

Several explanations for the disadvantages bilinguals face in certain cognitive functions related to language have been proffered. Most prominently these include the frequency effect and the issue of joint activation. The former bases a bilingual’s disadvantages on the premise that monolinguals use their single language more frequently than bilinguals use either of their respective languages. This approach is entirely plausible and is supported by several studies (cf. Sadat et al. 2012: 161) though others point to more communicative bilinguals whose frequency surpasses that of a monolingual’s (e.g. Gollan & Silverberg 2001: 65). In the joint activation approach, the disadvantages are explained with the simultaneous activation of both languages, even when the situation clearly only requires one language. This is believed to make linguistic processing more difficult with the result of delayed retrieval (Bialystok et al. 2012: 241).

Interestingly enough, Yu and Schwieter believe that language processing may have the opposite effect. They contend that “[i]t is the constant management and monitoring of more than one language system that may be the most responsible for the reported advantages in general executive functions” (2018).
They attribute an important role to language mode in the bilingual advantage debate. In her review of the issue, Eberhaut points to several studies that show that “joint activation facilitates language learning or the handling of language-related material” (2015: 20). This implies that bilinguals have an advantage when, for instance, acquiring one or more additional languages.

Early bilinguals may also have phonological advantages. Infants seem to have an inherent ability to differentiate between phonemes, a skill which atrophies in individuals that are exposed to only one language before the age of approximately eight months. Evidence suggests that bilingual children retain the ability to distinguish speech sound not belonging to their speech environment indefinitely (Byers-Heinlein et al. 2010 discussed in Bialystok 2012: 245).

Another well-documented advantage for bilingual children is their metalinguistic awareness, which “their ability to solve linguistic problems based on understanding such concepts as the difference between form and meaning” demonstrates (Bialystok 2012: 240). Typical methods to ascertain metalinguistic awareness in children include word substitution tasks and the evaluation of grammatically accurate but semantically incongruous sentences (e.g. Kalashnikova & Mattock 2014:112).

An advantage for bilinguals, regardless of their age of acquisition, is their more extensive variety of language choice. In a monolingual setting, this may not seem like a benefit. However, in a bilingual context, a bilingual speaker has a choice between conversing in L1 or L2. In a favourable situation, it is even possible to choose both languages at the same time and to communicate via code-switching (Albrecht 2006: 62-63).

The benefits of BL may go beyond the bounds of language processing and learning or metalinguistic awareness. Some research suggests that bilingualism may have a positive impact on ageing by delaying the onset of symptoms of dementia by way of adding to a bilinguals cognitive reserve. This notion is based on evidence that bilinguals have a higher level of executive control (EC), as they “outperform monolinguals in the set of abilities involved in controlling
attention, inhibiting distraction, and shifting between goals” (Bialystok & Craik 2015: 571). Bialystok and Craik ascribe the advantage in EC to joint activation and show that it also persists in older bilinguals. Thus they attribute older bilinguals’ additional cognitive reserve to their higher level of EC, thereby delaying the onset of dementia (2015: 583-5). What muddies the waters, however, are contradicting voices that cite replication failure and publication bias (e.g. Goldsmith & Morton 2018: 328). In fact, in a more recent publication, the Bialystok group modifies their earlier work after their new data failed to support their earlier hypothesis (cf. Grundy et al. 2017).

In his easy-to-read book on FAQ about bilingual upbringing and education, Colin Baker lists additional benefits such as character, curriculum, and cash advantages. In light of the evidence discussed above, there seems to be a strong case for the advantages of BL outweighing the disadvantages, even without turning to alliteration (Baker 2014: 2).

2.1.8. Raising Children in Two Languages

The decision to raise one’s children bilingually has far-reaching consequences, well beyond the benefits and disadvantages mentioned above. Some parents consider the various routes they could take and make an informed choice. Others do not have different options because the situation or their linguistic backgrounds do not offer any. Again others may not have a specific approach in mind. Childhood bilingualism can be classified by factoring in “the language or languages spoken by the parents to the children and the language of the community” (Baker & Wright 2017: 106). Romaine (1995) did this in her survey of the issue by looking at the circumstances of bilingual child raising in the relevant literature. The resulting six types of bilingual families are presented below by listing the parents’ and community’s language(s) as well as the strategy that the parents chose to follow.

Type 1: ‘One Person – One Language’
Parents: The parents have different native languages with each
having some degree of competence in the other’s language.

**Community:** The language of one of the parents is the dominant language of the community.

**Strategy:** The parents each speak their own language to the child from birth. (Romaine 1995: 183-4)

**Type 2:** ‘Non-dominant Home Language’/‘One Language – One Environment’

**Parents:** The parents have different native languages.

**Community:** The language of one of the parents is the dominant language of the community.

**Strategy:** Both parents speak the non-dominant language to the child, who is fully exposed to the dominant language only when outside the home, and in particular in nursery school. (Romaine 1995: 184)

**Type 3:** ‘Non-dominant Home Language without Community Support’

**Parents:** The parents share the same native language.

**Community:** The dominant language is not that of the parents.

**Strategy:** The parents speak their own language to the child. (Romaine 1995: 184)

**Type 4:** ‘Double Non-dominant Home Language without Community Support’

**Parents:** The parents have different native languages.

**Community:** The dominant language is different from either of the parents’ languages.

**Strategy:** The parents each speak their own language to the child from birth. (Romaine 1995: 185)

**Type 5:** ‘Non-native Parents’

**Parents:** The parents share the same native language.

**Community:** The dominant language is the same as that of the parents.

**Strategy:** One of the parents always addresses the child in a language which is not his/her native language. (Romaine 1995: 185)

**Type 6:** ‘Mixed Languages’

**Parents:** The parents are bilingual.

**Community:** Sectors of community may also be bilingual.

**Strategy:** Parents code-switch and mix languages. (Romaine 1995: 185)

Baker and Wright call these “broad types”. Additional constellations are possible and different strategies may apply to the individual circumstances (Baker & Wright 2017: 106; cf. Harding-Esch & Riley 2003: 52-53).
2.2. Code-Switching

Although there is much debate in many of the areas discussed above, one thing has become evident: a bilingual’s language repertoire does not merely consist of two strictly separated language systems. His or her respective languages have an impact on each other. Even casual observation shows that there is some overlap which manifests itself in the way bilinguals communicate, for instance, by using German words in an English speaking environment. This result of language contact is seen by some as negative interference, for example, by language teachers or parents, and in many contexts, this is a valid attitude. However, if a bilingual’s language system is dynamic and integrated and includes compound concepts, then a strict separation of languages seems somewhat restrictive. As Matras aptly phrases it, language contact as seen from a bilingual’s perspective is “about how we bypass these restrictions and mix our languages in actual conversation” (Matras 2009: xiii). They are bypassed in various ways, and we can distinguish several different types of language contact phenomena (hereafter LCP).

There is no prescribed terminology in the study of LCP. The relevant literature reflects this, where researchers employ various classifications, including transference, interference, borrowing, code-mixing, code- or language-switching, loan translation, nonce borrowing, etc., sometimes with overlapping definitions. The definitions the main LCP include some discussion of opposing views. However, they do not offer an exhaustive review of the nomenclature of language contact studies but instead, are meant to form a basic useful framework for analysing and discussing the data included in the case study.

Code-switching (hereafter CS) is currently one of the foremost topics in the study of BL. It is the focus of numerous studies and peer-reviewed articles as well as some monographs and has induced a number of intense discussions. As of yet, there is no uniform definition of CS, which can at least partially be attributed to researchers from various disciplinary backgrounds studying the phenomenon. However, a generally accepted broad definition is “the ability on
the part of bilinguals to alternate effortlessly between their two languages” (Bullock & Toribio 2009: 1). This ability indicates that CS is something done exclusively by bilinguals. Some linguists find this to be constrained and include switching between two language varieties, thus accommodating monolinguals who switch between dialects or registers (Myers-Scotton 2006: 239). Here, the term CS is used for bilingual speech with a focus on switches between two distinct languages. In the following chapters, we will develop a more distinct definition of CS by taking a closer look at grammatical, neuro- and psycholinguistic, sociolinguistic, and educational aspects of CS.

2.2.1. Grammatical Aspects of Code-Switching

Code-switching can “take place at any level of linguistic structure.” (Poplack 2010: 15), i.e. at a discourse level, between sentences, within a sentence or clause and even within a single word. However, this does not mean that ‘anything goes’. Empirical observation shows that CS is not arbitrary but rather follows certain patterns and constraints, in other words, CS is grammatical and is bound by the requirements of well-formedness. Therefore, the majority of CS research focuses on the analysis of what mechanisms facilitate grammatical CS, e.g. by establishing permissible switch locations and determining the nature of constraints on switching.

2.2.1.1. Grammatical Constraints on Code-Switching

Early attempts at finding grammatical principles for CS merely described switching sites. They did not define particular constraints because researchers held the opinion that “there are perhaps no syntactic restrictions on where the switching can occur” (Lance 1975: 143). Soon after that, linguists began to formulate constraints, though at first these remained descriptive rather than structural and were largely language specific. More structurally oriented approaches include Joshi’s proposal that “[c]losed class items (e.g., determiners, quantifiers, prepositions, possessive, Aux, Tense, helping verbs, etc.) cannot be
switched” (1985: 194) and the Functional Head Constraint, by Belazi et al. (1994). Gumperz formulated a pragmatic constraint according to which “switching is blocked where it violates the speaker’s feeling for what on syntactic or semantic grounds must be regarded as a single unit” (1982: 89-90).

Some approaches became more influential and incited further research, for instance, Sankoff and Poplack’s Free Morpheme and Equivalence Model (1981). The free morpheme constraint entails that

[c]odes may be switched after any constituent in discourse provided that constituent is not a bound morpheme […] unless one of the morphemes has been integrated phonologically into the language of the other. (Poplack 1980: 585-586)

The equivalence constraint states that “Code-switches will tend to occur at points in discourse where juxtaposition of L1 and L2 elements does not violate a syntactic rule of either language” (1980: 586). Poplack presented the model as being universally applicable. Their constraints were reviewed and tested by others and were generally accepted for Spanish-English CS. However, they could not be confirmed to hold for other languages, especially for structurally different language pairs (Albrecht 2006: 48-49).

DiSciullo, Muysken and Singh (1986) relied more upon hierarchical relations and found that “the process of code-mixing is constrained by the government relation that holds between the constituents of a sentence” (1986: 1) and formulated the Government Constraint. Their main claim was that CS could only take place between lexically independent elements. This restriction would mean that “there is no code-switching between verb and object or between preposition and noun-phrase in a prepositional phrase” (Albrecht 2006: 49). Also, the authors submitted likely sites for switches within the sentence. Counter to their claims, the Government Constraint could not be verified as a universal model and others criticised it as as being “too restrictive” (Belazi, Rubin & Toribio 1994: 224).

As we can see, the different models and constraints mentioned so far, fall short of universal validity. The highly diverse nature of CS, with its differing
structures in various contact situations as well as the typological divergence of the languages involved, raises the question of whether there are any universal constraints on CS. In her comprehensive approach, Myers-Scotton (1993) attempts a model that encompasses not only CS but also monolingual speech. Her Matrix Language Frame (MLF) model takes the different roles of the languages involved in CS into account. Counter to other claims she maintains that the contributing languages are not an equal partnership. She builds on Joshi’s distinction between host and guest language, later termed matrix and embedded language (1985: 191). The matrix language (ML) or base language has the role of the frame-building language that supplies system morphemes as well as content morphs to the sentence. The embedded language (EL) has the role of a contributing language which is limited to content morphs. Myers-Scotton terms this the System Morpheme Principle. The Morpheme Order Principle, on the other hand, stipulates, that in mixed constituents, i.e. “constituents including morphemes from both languages” (2006: 244), the surface word and morpheme order follows the grammatical principles of the ML. The MLF model has three basic premises.

The first premise is that the Matrix Language and the Embedded Language do not participate equally in constituent structure. […]

The second premise is that not all morpheme types are equal in the sense that not all types can come equally from the Matrix and Embedded Languages. As you will see, these premises limit the Embedded Language to specific types of participation.

A third premise is that both languages are always “on” when a speaker engages in codeswitching, although the Matrix Language is always more activated. (2006: 243)

Since both languages are always active, the ML can change in the course of interaction, and it can be difficult to determine the current ML. Myers-Scotton resorts to counting morphemes, thus determining the ML statistically. Besides, the system morpheme principle helps to identify the ML, as the ML supplies system morphs as well as content morphs. Myers-Scotton and Jake (2000) updated the MLF model by substituting the juxtaposition of content and system morphs.
with the Four Morpheme (4-M) model. Besides the content morphemes, which remains according to the earlier categories, they divide system morphemes into early system morphs, bridge late system morphemes, and late system morphemes (Albrecht 2006: 51-52; Myers-Scotton 2006: 243-245; Matras 2009: 130-132).

Although Myers-Scotton’s MLF model provides a framework for the study of all LCP and can be employed in the study of CS between various language pairs, it is not automatically accepted as the standard model of CS. MacSwan, to name one prominent opponent, rejects the MLF model along with the distinctions of ML and EL and maintains that “[n]othing constrains code switching apart from the requirements of the mixed grammars” (1999: 146). The rejection of CS constraints does not mean that there is no unacceptable CS. He states that a particular language is a set of parameter values over the range of variation permitted by Universal Grammar, and code-switching involves the mixing of discrete languages. Hence, positing a constraint or other principle which explicitly refers to code-switching suggests that particular languages are primitives in syntactic theory, leading to an ordering paradox. (2013: 327)

Therefore, he repudiates any rules and principles explicitly referring to CS, “but rather expect[s] the observed constraints on code-switching to follow from other factors” (2013: 327). MacSwan’s minimalist approach clearly contradicted Myers-Scotton’s models and sparked a debate between the two linguists which was published in a series of exchanges (cf. MacSwan 2005a; MacSwan 2005b; Jake, Myers-Scotton & Gross 2005).

Green and Li Wei (2014) predicate that “[o]ver the decades, linguists have tried, but largely failed, to identify universal grammatical constraints on CS”. They explain this failure by reasoning that “CS is essentially a creative behaviour […] that gives rise to a variety of structural patterns” (2014: 500). They do however approve of the main types of CS that are generally agreed upon and employ them in their analysis.
2.2.1.2. Types of Code-Switching

In the literature on LCP and CS, researchers have come up with various terminology to define their code-switching models, hypotheses and theories. Therefore, there are several sets of terms for different types of CS. In his variation theory, Poplack (1980) distinguishes between tag-switching, inter-sentential code-switching and intra-sentential CS. The three types of CS are “characterized by switches of different levels of constituents” (1980: 613). Poplack also finds that “bilingual ability is an important factor in predicting the type of code-switch that will be uttered” (1980: 608). Tag-switches demand the least amount to bilingual proficiency and are embedded in the other language as formulaic expressions, e.g. ‘you know’ at the end or ‘I mean’ in the middle of a German sentence, generally for pragmatic effect. A speaker must have a greater bilingual ability to switch languages between sentences or clauses, i.e. inter-sentential CS while maintaining the grammatical rules in the respective language. Intra-sentential CS takes place within the boundaries of a sentence or clause. It requires the highest bilingual competence “because for many language pairs it usually does not violate the syntactic rules of either language” Albrecht 2006: 53). How the different grammars interact in intra-sentential CS has attracted the most attention.

Myers-Scotton differentiates between classic and composite CS. Her focus is on the former, which includes CS where only one of the languages provides the morphosyntactic frame for the utterance. This implies that in classic CS there is no complete shift to the other language. Composite CS, on the other hand, encompasses bilingual speech in which the greater part of the morphosyntactic frame come from the ML and the EL contributes to some of the underlying structure (2006: 241-242).

Muysken refers to intra-sentential CS as code-mixing and includes “all cases where lexical items and grammatical features from two languages appear in one sentence” (2000: 1). His typology of code-mixing distinguishes three degrees of mixing that comprise a separation continuum: congruent lexicalisation,
insertion, and alternation. The first, congruent lexicalisation, applies to CS between two closely related languages that share a syntactic frame, which is then filled with lexical elements from both languages. Insertional code-mixing is congruent with Myers-Scotton’s classic CS, i.e. lexical items are embedded into the syntactic structure of the base language. Alternation is the type of code-mixing with the largest degree of separation and takes place, for instance, where the main clause is in one language and the subordinate clause in another language (Treffers-Daller 2009: 67-68). Green and Li Wei (2014) adopt Muysken’s typology, though they use the term dense CS for congruent lexicalisation.

Children employ CS strategies that differ from adult CS and the types of CS mentioned above do not apply until the child is proficient enough to produce grammatically correct utterances in either language. For example, one strategy of very young bilinguals is the repetition of a single word in both languages. Redlinger and Park (1980) termed this phenomenon lexical duplication. However, there is no definite explanation for why children do this, as 2-year-olds are too young to ask about their intentions.

In addition to CS types that focus on grammar, García defines interactional CS in which participants speak different languages, each in turn. A typical example for interactional CS is where parents speak one language, i.e. their dominant language or a minority language, while the children answer in the language of the environment (1983: 143f).

2.2.2. Neuro- and Psycholinguistic Aspects of Code-Switching

Bilinguals differ from monolinguals in that they are constantly switching between their languages. This peculiarity has lead linguists and neuroscientists to examine whether bilinguals’ linguistic systems are stored separately or together, how their brains are influenced by possessing more than one language, how bilinguals keep their languages apart, etc. Thus researchers have found, for instance, that learning several languages alters a bilingual’s brain’s functional organisation as well as its anatomy (e.g. Coggins et al. 2004; Mechelli et al.
2004). However, among the many proposed explanations, theories and models in the related disciplines, this chapter focuses on aspects relating to CS, in particular, switching mechanisms and triggering.

2.2.2.1. Switching mechanisms

The bilingual brain does not only store and organise two languages, but it also has to facilitate switching. Leischner (1948) first came up with a theory of how the brain handles this, and Penfield & Roberts further developed it (1959). Their single-switch theory proposes a mental switch that turns off one language and turns on the other language, to avoid interference. Empirical evidence soon disproved the theory by showing that bilinguals could still understand one language while speaking another language, thereby demonstrating that both languages are active at the same time.

Macnamara (1969) expanded the single-switch theory into a two-switch model by incorporating the notion of the independence of bilinguals' productive and receptive language systems. However, researchers later dismissed his hypothesis of an output switch which is managed by the speaker and an input switch which responds automatically to the arriving language signal as being too theoretical. The consensus today is that a switch does not control the code-switching brain (Romaine 1995: 89-90).

For this reason, Albert and Obler (1978) suggested a monitor system which scans cues such as phonemes or consonant clusters, previously spoken language, environmental and non-linguistic information. Although the incoming item is initially directed to the lexical item in the corresponding language, it can also be processed in the other language. The monitor system is very flexible, sensitive and remains in a state of joint activation (1978: 106-110).

A more recent approach is Green and Li Wei’s control process model of CS (2014). They focus on how code-switchers speak the right words in the correct order. They base this serial order on “a speech plan in which items are represented in parallel” (2014: 499). Their main hypothesis is that “entry into the
mechanism for speech planning (a competitive queuing mechanism) is governed by CPs best suited to the particular types of code-switches. Language task schemas external to the language network govern access” (2014: 499). In CS, these language task schemas cooperate either in an open control mode, which dense CS requires, or a coupled control mode, which allows alternations and insertions. This control process is also in effect during single language use. Green and Li Wei allow that their predictions may prove to be false but hold to their opinion that the study of CS processes will promote additional insight into the function of language control (Green 2018: 12).

2.2.2.2. Triggers

A bilingual’s switch between two languages can be motivated by various factors, for example,

difficulties of retrievability of adequate means of expression in one of the languages, by stylistic effects and the creative structuring of the discourse, or by language-specific associations evoked during the conversation. (Matras 2009: 105)

These are referred to as triggers. Clyne (1967), who bases his theory of CS on triggers, distinguishes between externally and internally conditioned CS. While externally conditioned CS are defined similarly to situational CS, internally conditioned CS describe psycho-linguistically affected switches. Particular trigger words initiate CS, especially in typologically adjacent language pairs, e.g. English and German. Clyne describes consequential triggering as “words at the intersection of two language systems which, consequently, may cause speakers to lose their linguistic bearings and continue the sentence in the other language” (1991: 193). Anticipatory triggering occurs when a speaker thinks ahead in the conversation and anticipates a word in the other language. Finally, contextual triggering is not word specific but contingent upon the entire situation (Clyne 1967: 84-91).

Broersma and De Bot (2006) updated Clyne’s mode to match current speech production models. Their main criticism is that “the triggering hypothe-
sis implies that language choice is made at the surface level” (2006: 4). They maintain that a trigger word is selected before the surface structure is formed and that the selected trigger may cause a shift in the activated languages on the lemma level. This can in turn “enhance the activation of all the lemmas of a non-selected language […] thereby raising the chance that one of these lemmas will get selected afterwards” (2006: 4). In a subsequent corpus-based study of CS triggers, Broersma found further evidence for triggered CS, especially when cognates are involved. The study produced results about which words can trigger CS, i.e. proper nouns, cognate content words with good and moderate form overlap and cognate function words. Significantly, Broersma discovered that switches are not limited to taking place directly after but also before a cognate (2009: 447).

Green and Li Wei's corpus data also support Clyne's concept of trigger words. Especially when using structures common to both languages, a combinatorial node is likely to be activated and, for instance, ”a cognate may provide further lexical boost for a code-switch” (2014: 504). However, Green and Li Wei do not completely separate the external from the internal conditions for CS. They believe that ”[t]he interactional context determines how schemas are coordinated. It induces habits of language control” (2014: 506). A monolingual context calls for a different type of cognitive control than a bilingual situation. Situational cues may trigger these habits of control which in turn determine whether the brain operates in coupled or open control mode.

2.2.3. Sociolinguistic Aspects of Code-Switching

Penelope Gardner-Chloros argues that “CS should be considered first and foremost from a sociolinguistic perspective” (2009: 97) and she offers three reasons for this presumption. Firstly, she points to the fact that the two fields of interest, the study of sociolinguistic and the study of CS, came up together and share a common developmental history. Secondly, she maintains that interest in CS was first sparked because it became clear that speakers in multilingual
communities were combining several languages or varieties in socially meaningful ways. Finally, Gardner-Chloros states that “sociolinguistic factors are the prime source of variation in CS behavior” (2009: 98) and have an influence even on a grammatical level. On a macro level, the study of sociolinguistic aspects of CS looks at multilingual communities, i.e. diglossic or immigrant communities, and conducts comparisons between and within different communities, investigates how they maintain the different languages, or what role the languages have in the community. The following chapter will touch on some relevant topics on an individual level, in particular, who engages in code-switching, attitudes towards CS, language choice and reasons for CS.

2.2.3.1. Code-Switchers and Attitudes

According to Franceschini (1998), the prototype of a code-switcher is young, lower class and a member of a minority group with strong ethnic allegiance. While it is true that CS is often the norm in language contact situations, for instance in immigrant communities, it is important not to understand this as a negative stereotype. A typical negative attitude towards CS, for instance, is the opinion that CS, especially when observed among minority communities, is a sign of a lack of language proficiency and language degeneration. The misconception of CS as being a random mixing of languages has lead to playful yet pejorative expressions such as *spanglish*, *tex-tex*, *ingeñio*, *franglais*, *finnglish*, etc. and metaphors suggesting a linguistic hodgepodge spoken by the uneducated. So-called language purists may hold this attitude, but researchers from various fields view it as an opportunity to study the outcome of languages in contact, be it on a structural level, a cognitive level, or a sociolinguistic level (Bullock & Toribio 2009: 4).

The meanwhile significant body of research demonstrates that CS is not random but systematic. The data also show that CS is not limited by age, class, education, ethnicity or minority language group affiliation. CS can be employed by “[a]ny healthy individual who speaks more than one language” (Bullock &
It is usually under the conscious control of bilinguals though, interestingly, not all bilinguals code-switch. Those who do, employ CS as a language strategy that facilitates communication, no matter how proficient they are in either language. Nevertheless, the types of CS that speakers use are closely related to their respective language proficiencies. Tag-switching, for instance, does not call for a high degree of proficiency as it is formulaic and occurs among bilinguals with very little knowledge of one of the languages. On the other hand, intra-sentential CS “correlates with increased mastery of linguistic structure” (Bullock & Toribio 2009: 8). CS allows a bilingual to fall back on their entire language repertoire. Valdés penned a fitting metaphor by pointing out that

> it is helpful to imagine that when bilinguals code-switch, they are in fact using a twelve-string guitar, rather than limiting themselves to two six-string instruments. (1988:126)

In addition to his structural interpretation, Muysken also interprets his three types of CS on a sociolinguistic level, in terms of bilingual strategies. According to his analysis, alternation is most often found in “stable bilingual communities with a tradition of language separation”, insertion is frequently used “in colonial settings and recent migrant communities” with a noticeable asymmetry of language proficiencies. Congruent lexicalisation “may be particularly associated with second-generation migrant groups […] and bilingual speakers of closely related languages with roughly equal prestige” (2000: 8-9).

In addition to societal attitudes towards CS and how it can influence speech behaviour, Albrecht stresses the vital role of parent attitude. Her data show that the parents’ reactions to CS influence their children’s CS behaviour (Albrecht 2006: 62). Finally, CS may reflect the speaker’s attitude towards the languages and the social situation. Much CS can indicate positive associations with the involved languages. Little CS can be a sign of tensions between speech communities (Myers-Scotton 1998: 99-100).
2.2.3.2. Language Choice

In a bilingual setting, language choice is a complex process. Since the participants’ languages are all likely to be activated, it is not merely a choice of one or the other language. In the course of their interaction, they may switch to another language entirely or even settle on CS as their language choice. Since the early days of sociolinguistic research on CS, researchers have pursued the question of how a speaker chooses the suitable language in a multilingual situation. Herman (1961), for instance, proposed three factors: personal needs, the immediate situation and the background situation. In a given context, one of these factors would have the highest potency and thus determine language choice.

Fishman (1965) put forward group membership (age, race, sex, religion, etc.), situation (physical setting, and style and function of discourse) and topic as decisive factors in language choice. As for the topic, speakers may prefer to use different languages for different topics. For example, children who usually speak to their parents in their heritage language might choose the majority language when speaking about what they learned in school. Similarly, Blom and Gumperz (1972) proposed a model for studying language choice based on the participants, the setting and the topic. They emphasise that social factors limit the selection of linguistic factors and that social factors take precedence over personal factors (1972: 421).

In her Markedness Model, Myers-Scotton suggests that language choice is either unmarked or marked. In a given context (topic, setting, participants, etc.) an unmarked choice is more or less expected. A marked choice is not expected in the interaction and therefore adds to the meaning of the message, in particular relating to solidarity and the power dimension (Myers-Scotton 2006: 159-160).

Other theories on language choice include Saunders’s, who believes that a speaker’s background knowledge of the interlocutor determines language choice with this person, regardless of the setting (1982: 79). Gumperz stresses the “sharing of codes and principles of interpretation” (1982: 75, emphasis added
by me). Li Wei, Milroy and Pong Sin Ching (1992) take a different approach by basing their social network theory on social theory as opposed to sociolinguistic theory. Lastly, these sociolinguistic processes are not limited to bilinguals but are found in monolinguals as well. Gumperz (1982) describes CS as a contextualisation cue.

Code switching signals contextual information equivalent to what in monolingual settings is conveyed through prosody or other syntactic or lexical processes. (Gumperz 1982: 98)

Where bilinguals can employ strategies of language shifting or CS, monolinguals can style shift. Depending on the various factors listed above, a monolingual will, for instance, choose a different register or dialect to meet his or her communicative needs (Bullock & Toribio 2009: 2).

2.2.3.3. Reasons for Code-Switching

This chapter is closely related to the topic of language choice. The factors influencing the speaker to prefer one language over the other in a bilingual situation can also lead to the option of CS. Based on their data from mixed ethnic groups in East Africa, Scotton and Ury (1977) hypothesised that the main reasons for CS are the avoidance of a definition of an interaction and the redefinition of a situation. They stipulate that “code-switching occurs because at least one speaker wishes to redefine the interaction by moving it to a different social arena” thereby changing one’s identity and shifting the power relation (1977: 5). This may generally be the case, especially in multilingual communities, however, on an individual level, reasons for CS are often personal, contextual or stylistic.

On the personal level, CS can be connected to proficiency, personal preference and emotional involvement. The reasons for CS based on proficiency and preference can be closely related, for instance, when speakers have a dominant language. Especially at an early level of language acquisition, they resort to CS because they are not able to produce in the target language. Speakers may include CS for lexical gaps if the word is not readily available, i.e. to avoid pauses
Sometimes a word in the other language is preferable to the corresponding one in the current language. As mentioned in the introduction, sometimes I simply favour certain German word over their English counterparts.

Contextual or situational reasons for CS include a change of topic, setting or participants. The setting is the weakest reason for CS as it usually does not change abruptly. For adults, the topic is a larger factor than for children. The most common factor for situationally motivated CS is the participant constellation. Stylistic or pragmatic reasons include code-switching for “emphasis, elaboration, clarification, attention attraction”, etc. (Albrecht 2006: 66).

Finally, we should keep in mind that bilinguals do not have to have a reason for CS. Gardner-Chloros stresses this aspect by emphasising the “wide range of sociolinguistic factors that interact or operate simultaneously”. Therefore, “ascribing particular ‘reasons’ to particular instances of CS [is] likely to present only a partial picture” (2009: 113). For this reason, she calls for pluralistic and interdisciplinary approaches employing quantitative as well as qualitative methods.
2.3. Other Language Contact Phenomena

2.3.1. Borrowing

Borrowing occurs when patterns from one language are reproduced and incorporated into another language, i.e. if the reproduction is conventionalised. The borrowed elements are then embedded in the other language or base language. For this paper, the borrowing of lexical elements is in the foreground, essentially nouns and verbs, i.e. content words. Two primary forms of borrowed words can be distinguished. The first are cultural forms or cultural loans which encompass borrowings that have no equivalent word in the recipient language, for example, institutional terminology. Monolinguals adopt them more readily since they do not substitute an established word or concept. The second sort are core forms which already have a corresponding concept in the base language. They are used, for instance, because they are more precise, shorter and more usual or merely because they are en vogue. Examples of German loanwords in English include *schadenfreude*, *zeitgeist* and *doppelgänger*. Conversely, the German language borrows from English, for instance, *CAD*, *download* and, unfortunately, *shitstorm* (Albrecht 2006: 45; Matras 2009: 110).

Another type of borrowing is called a loan-shift. Loan-shifts happen when the original meaning of a word is extended to take on additional meaning in the receiving language, or the base language is rearranged according to the pattern of the other language to take on a new meaning. An example for the second type is the literal translation of idioms into the base language, which can also be classified as a loan translation, a contact phenomenon which linguists have often ignored (Grosjean & Li 2013: 18-19; Dux 2017: 388).

The line between borrowing and code-switching is a controversial subject that has been widely debated, including discussions on the degree of phonological, morphological and syntactic integration, or social criteria and frequency (e.g. Albrecht 2006: 45; Myers-Scotton 2006: 260-261). For this thesis, the term borrowing will be used for instances of established loanwords as well as for proper nouns that are phonologically integrated into the base language.
2.3.2. Interference

Before the 1960s all LCP occurring in bilingual speech tended to be labelled as interference, which suggested that they were viewed as negative and abnormal, or as Myers-Scotton puts it, as “purposeful meddling – and definitely not welcome” (2006: 210). For instance, Weinreich defines inference as instances of deviation from the norms of either language which occur in the speech of bilinguals as a result of their familiarity with more than one language. (1968: 1)

On the other hand, Matras attempts a more positive description of interference or transfer. He states that it is a process by which the speaker makes or attempts to make creative, communicative use of elements of the combined, full repertoire of linguistic structures in a context that requires selection from just a subset of that repertoire, i.e. from the appropriate ‘language’. (2006: 74)

According to this very general statement, interference can occur on all linguistic levels. Phonological interference or phone substitution is when speakers model their pronunciation of individual phonemes on their other language. For instance, a German speaker may pronounce the /w/ as a [v] in ‘wait’ and ‘away’. An example of morphological interference is the adding of the English plural morpheme –s to produce a plural in German (e.g. Papiers, Fensters, Kuhs). Lexical interference is often the result of literal translation but can also result from similar sounding words in the two languages. Finally, syntactic interference includes the transfer of word order to the recipient language (Albrecht 2006: 46-47; Matras 2006: 72-74).
3. Case Study

In my case study, I look at the language production in an English/German bilingual family with a focus on LCP, in particular, CS. The research questions I am concerned with are the frequency of CS, the type of CS employed and changes in the matrix language. In a closer analysis, I will look at which parts of speech are switched in intra-sentential CS, how well they are integrated and whether there are any instances of interference and borrowing. Finally, I will identify and discuss possible CS triggers.

Before analysing the data, however, I will outline the method of data collection and transcription. A large part of this chapter is then dedicated to the informants, their language histories and which types of bilinguals the represent.

3.1. Data Collection

There are several available procedures for the collection of linguistic data, including interviews, tests, questionnaires, etc. Each method is carefully selected to provide data that is both valid and relevant to the research questions. I opted to record free conversations. The advantage of this method is that it does not unduly influence the participants’ language production, though their awareness of being recorded can be a limiting factor. For this study, the participants were made aware of recordings taking place, and they gave their general consent. However, they were not informed when the recording process began.

The setting of the first recording ‘Dinner’ is a communal meal. The second recording ‘May I’ was made during a card game. Both conversations were recorded on December 24th, 2005. The mention of ‘Freckles’ refers to the family dog.

The recordings were transcribed as follows:
- A number identifies the speaker.
- Overlapping speech is indicated by square brackets.
- Short pauses are marked with a period; longer pauses with several periods.
3.2. Informants

The informants are all members of one bilingual family. The formerly monolingual English speaking parents and their two children, who are not part of this study, emigrated from the United States to Germany in 1979 and to Austria in 1980.

They began SLA by enrolling in a language course at the Goetheinstitut in Bavaria and continued with full immersion in the Austrian language and culture. They decided to make English their family language, which is congruent with a Type 3 bilingual family, i.e. Non-dominant Home Language without Community Support (Romaine 1995: 184). The children were encouraged to speak English at home as well as when conversing with family members in public. They acquired German outside the home, in the neighbourhood, at church functions, etc., as well as within the home, as the family frequently had German speaking guests.

Concerning types of bilingualism, as discussed above, all family members can be described as being individual, exogenous and bicultural bilinguals. They are individual bilinguals because they are not part of an English/German bilingual community. Their bilingualism is exogenous because the English language is not present in the surrounding speech communities, though it is the second language of choice in Austria’s education system. Whether they are compound or coordinate bilinguals is hard to determine, and it most likely depends on the topic. Both parents are late elective bilinguals. The two oldest children, who are not part of the study, were 5 and 2 when they moved to Germany. Their development of bilingualism can be categorised as early second language acquisition and successive bilingual acquisition, respectively. The other six children were all born in Austria and acquired their languages through bilingual first language
acquisition. Their language histories list the participants’ respective degree of bilingualism and their ability in receptive and productive skills.

3.2.1. Participant profiles

The following profiles provide the respective speaker’s sex, age, education and occupation. Their language histories only mention contact with other languages that was longer than six months. Language proficiency in the various skills is described according to self-evaluation.

Speaker 1, male, age 25

Highest completed education: 12th grade, graduated from secondary school

Current occupation: medical student

Language history: BFLA, 12 years of school instructed in German, 9 years of formal English education in school, 6 years of Latin, 7 months spent in Honduras with no formal instruction

Proficiency: high level of receptive and productive proficiency in both English and German; scientific discussions in both languages; peer-reviewed papers published in English; some oral proficiency in Spanish

Speaker 2, male, age 23

Highest completed education: 13th grade, graduated from five-year technical vocational school

Current occupation: student - English, history, education

Language history: BFLA, 13 years of school instructed in German, 10 years of formal English education in school (the last 5 years with a focus on building and structural engineering), 2 years spent working in the United States, 8 semesters of English and 2 semesters of Latin at the university
Proficiency: high level of receptive and productive proficiency in both English and German; university term papers with passing scores in both languages; some issues with orthography and punctuation in both languages.

Speaker 3, female, age 21

Highest completed education: 13th grade, graduated from five-year vocational business school

Current occupation: pharmacy student

Language history: BFLA, 13 years of school instructed in German, 10 years of formal English education in school (the last 5 years with a focus on business English), 4 years of Italian as second foreign language and 2 years of Spanish as third foreign language

Proficiency: high level of receptive and productive proficiency in both English and German, writing in English is the weakest skill; good oral skills and fair literacy in Italian; fair oral skills and some basic literacy in Spanish

Speaker 4, female, age 18

Current education: 12 grade, 4th year of 5-year vocational business school

Language history: BFLA, 12th year of school instructed in German, 9th year of formal English education in school (the 4th year with a focus on business English), 4th year of Italian as second foreign language and 1st year of Spanish as third foreign language

Proficiency: high level of receptive and productive proficiency in both English and German, writing in English is the weakest skill; fair oral skills and passing literacy in Italian; incipient oral skills and elementary literacy in Spanish

Speaker 5, female, age 16

Current education: 10th grade, secondary school
Language history: BFLA, the 10th year of school instructed in German, 7th year of formal English education in school, 2nd year of Latin

Proficiency: high level of receptive and productive proficiency in both English and German, writing in English is the weakest skill

Speaker 6, male, age 14

Current education: 8th grade, secondary school

Language history: BFLA, 8th year of school instructed in German, 5th year of formal English instruction in school.

Proficiency: proficient in oral skills in both languages; less proficient in reading and least in writing due to dyslexia.

Speaker 7, female, age 55

Highest completed education: associates degree

Current occupation: homemaker

Language history: monolingual in English; German language school in Bavaria at age 29: 16 weeks at 26 hours per week, SLA through contacts in the community; language course in Austria at age 31: 8 weeks at 20 hours per week

Proficiency: high proficiency in English; good oral and reading as well as fair writing proficiency in German, American accent, some instances of confused definite articles

Speaker 8, male, age 55

Highest completed education: respiratory therapist

Current occupation: Bible teacher, lecturer

Language history: monolingual in English; German language school in Bavaria at age 29: 24 weeks at 26 hours per week with university-level exams; SLA
through contacts in the community; daily reading of newspaper and listening to the news in German as well as reading popular literature in order to learn idiomatic speech and cultural background.

**Proficiency:** high proficiency in English; high receptive and productive proficiency in German, public speeches and published articles in both languages, American accent, some instances of confused definite articles; some oral proficiency in Italian, Bulgarian and Croatian

The practical advantages of being bilingual are evident in all the participants. However, disadvantages such as greater response latencies, etc. are hard to gauge. What the participants do noticeably exhibit is the tip-of-the-tongue phenomena, especially when asked to translate a word or concept quickly.
3.3. Analysis

3.3.1. Limitations of the Data

We will see that the data used in this study is limited which is mainly due to my choice of domain and participants. My area of interest is to analyse CS within the domain of the core family. As mentioned above, the home language is English, and all family members are encouraged to communicate with each other in their family language. This rule has a considerable influence on language choice and the readiness to switch to German entirely.

3.3.2. Matrix Language

Throughout both recordings, English is the ML and German is the EL. There are no examples of the ML changing. The few instances of inter-sentential CS are isolated utterances that are embedded in the ML. In some cases of intra-sentential CS, items from the EL are even separated by ML conjunctions.

3.3.3. Code-Switching

3.3.3.1. Quantitative Analysis

The quantitative analysis was carried out by counting the total number of words and instances of CS. The code-switches were then classified, and intra-sentential CS were decided up, according to which parts of speech were switched. As seen in Table 1, a total number of 5227 words were spoken, 147 (2.81%) of which were in German. I have identified 97 instances of CS, 5 of which are inter-sentential. Most of the 89 intra-sentential CS is done by switching a single word. The percentage of German words, as well as the number of code-switches, is higher in Recording 1 (4.21% / 78 CS) than in Recording 2 (0.83% / 16 CS). I attribute this marked difference to the situation, especially the topics and the conversational style. Recording 1 took place at the dinner table. It was open to various topics and characterised by continuous and overlapping speech. On the other hand, the topic of Recording 2 chiefly revolved around the
game itself. The participants were focussed on their cards and took conversa-
tional turns.

<table>
<thead>
<tr>
<th></th>
<th>total</th>
<th>Recording 1</th>
<th>Recording 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>total words</td>
<td>5227</td>
<td>3062</td>
<td>2165</td>
</tr>
<tr>
<td>German words</td>
<td>147</td>
<td>129</td>
<td>18</td>
</tr>
<tr>
<td>total CS</td>
<td>97</td>
<td>81</td>
<td>16</td>
</tr>
<tr>
<td>inter-sentential CS</td>
<td>5</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>intra-sentential CS</td>
<td>92</td>
<td>76</td>
<td>16</td>
</tr>
</tbody>
</table>

Table 2: Word count and number of code-switches

The part of speech that is switched the most is lone nouns and noun phrases. A total of 80 noun phrases amount to 86.96% of all intra-sentential CS. Verbs make up for 8.70% of CS with adjectives and interjections each contributing 2.17%. This distribution is even more marked in Recording 1 with 92.10% nouns, 6.58% verbs and 1.32% adjectives. While the majority of switches in Recording 2 are also nouns (62.50%), the percentage of verbs is much higher compared to Recording 1 (18.75%). Due to the lower frequency of CS in Recording 2, an interpretation of the discrepancy between these percentages does not seem meaningful.

<table>
<thead>
<tr>
<th></th>
<th>total</th>
<th>Recording 1</th>
<th>Recording 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>intra-sentential CS</td>
<td>92</td>
<td>76</td>
<td>16</td>
</tr>
<tr>
<td>noun phrases (proper nouns)</td>
<td>80</td>
<td>70</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>(28)</td>
<td>(27)</td>
<td>(1)</td>
</tr>
<tr>
<td></td>
<td>86.96%</td>
<td>92.10%</td>
<td>62.50%</td>
</tr>
<tr>
<td></td>
<td>(35 %)</td>
<td>(38.57 %)</td>
<td>(10 %)</td>
</tr>
<tr>
<td>verbs</td>
<td>8</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>8.70%</td>
<td>6.58%</td>
<td>18.75%</td>
</tr>
<tr>
<td>adjectives</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2.17%</td>
<td>1.32%</td>
<td>6.25%</td>
</tr>
<tr>
<td>interjections</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2.17%</td>
<td>0</td>
<td>12.50%</td>
</tr>
</tbody>
</table>

Table 3: Intra-sentential code-switches
3.3.3.2. Inter-sentential Code-Switching

This section discusses all five examples of inter-sentential CS. Each example explains the conversational situation as it generally helps determine the reason for switching. A translation of the EL is provided in bold below the quoted transcription.

In Extract 1, speaker 2 has just finished telling a story about a colleague, who always finished his meal first. Speaker 6 responds by CS to German and pretending to brag. After a short pause, speaker 6 switches back to English and asks a question about the colleague mentioned above, Noel. Talk about Noel is not the reason for switching. Speaker 2 is not pretending to quote Noel as he knows Noel to be an English speaker. Instead, speaker 2 triggers the bragging with “always finished first”, which in turn triggers the CS. For speaker 6, boasting seems to be part of a German-speaking domain, e.g. among friends or at school, because as soon he finishes bragging, he returns to English.

The topic of Noel is continued in Extract 2. Speaker 2 explains that Noel was born on Christmas Day. Speaker 1 comments on this by stating that the French rendition is better than naming a child Christmas in English. He then goes on by code-switching the name into German and testing it in a simulated greeting. Again, the reason for CS is not Noel’s language background but rather a play on languages, from Noel to Christmas to Weihnachten.

Extract 1:

(10) well he always finished first then he watched everybody else eat
(11) Ich bin der kaiser du bist nur der könig ich bin erster ich bin fertig … how can you call your kid noel

I’m the emperor, you’re just the king. I’m first, I’m finished!

Extract 2:

(13) well he was born on christmas day
(14) he must have birthday tomorrow
(15) it’s better than calling him christmas. weihnachten hehe. hallo weihnachten

Christmas, haha! Hello Christmas!
Extract 3 demonstrates another code-switched pretend conversation. The topic is about a person with a lower limb prosthesis, which speaker 1 refers to as a ‘peg leg’. Speaker 2 picks up the term and tells his sister that he would call her ‘peg-leg’ if she had a prosthesis, which in turn leads speaker 3 to greet ‘peg-leg’ in English. She then simulates a response of an Austrian to such a greeting, thereby exaggerating an Austrian pronunciation of the English words. In this case, the trigger is the speaker’s wish to render someone’s original quote, even if she only imagines it.

Extract 4 includes an example of an actual quote. Speaker 5 recalls a conversation and switches to German to reproduce what her interlocutor said. She describes the setting of the quote in English, switches to German to recreate the quote, returns to English to comment on it, and finally finishes her quote in German. The reason for CS merely is speaker 5’s wish to repeat the original wording. As everyone understands her, she does this in the local Austrian dialect.

Extract 3:
(185) 1 peg leg
(186) 2 I’d call you peg-leg
(187) 3 hi peg-leg. *wos is wes woast peg leeg*

What’s that? What does peg leg mean?

Extract 4:
(244) 5 the other day *maxi rass says* . *boa erinnerst du di no wann die gretti bei eich woa ..* she just says it like that . that was when I was a baby

Wow, can you remember when Gretti was at your place?

(245) and I can’t remember but I just thought it was so funny . *an des hob I jetzt grod denkn miasn wia I di gsegn hob* I just had to think of that when I saw you.

We have seen that, while inter-sentential CS occurs in the data set, it does not lead to changes in the ML. The German sentences or clauses are embedded in the English conversation and are employed to recreate German quotes and to
play with language by simulating German speech and reactions. Extract 1 is the only instance of domain induced inter-sentential CS.

3.3.3.3. Intra-sentential Code-Switching

Most CS in the recorded conversations was done on an intra-sentential level, in many cases by switching only one word. In this chapter I will analyse examples of intra-sentential CS with a focus on how the utterances are integrated into the ML and whether they are grammatical, i.e. whether they follow the requirements of well-formedness. I will also attempt to locate the triggers that caused the speakers to resort to CS. The following discussion is organised according to the part of speech that is CS in.

3.3.3.3.1. Noun Phrases

Noun phrases constitute the part of speech that is switched most often in the recorded data. Proper nouns comprise 35% of the CS of nouns and include personal names, place names and institutions. The reason for listing them as CS and not as borrowings is that they are pronounced in German. Borrowings do not necessarily have to be integrated into the base language on a phonological level (cf. 3.3.4.). However, the instances found in the data are not incorporated and conventionalised in the English language. In some cases, the switching of proper nouns may even be the trigger for subsequent switches.

The following extracts do not contain all instances of code-switched nouns. They are chosen to exemplify the various patterns detected in the data. Extracts 5-8 are examples for simple switches of a single noun. The sentence structure does not need to change to accommodate the noun, and the English word can just be substituted for its German counterpart. The examples contain various triggers. In extracts 5 and 6, the topic initiates the switches. In both cases, the speakers are conversing about domains in which they usually speak German, i.e. church and university. These domains activate the EL to a higher degree and make the items more retrievable in German, thus allowing for CS to
occur more easily. Similar reasons explain CS in Extract 7. Speaker 4 is talking about a friend and very likely recalls the conversation in German while speaking English. In Extract 8, the obvious choice for CS battery is its cognate *batterie*. However, in German non-rechargeable batteries are often distinguished from rechargeable batteries by using the separate terms of *Batterie* and *Akkumulator* or *Akku*. In the example, the speaker refers to the latter. Since battery and *Batterie* are very likely to share one concept with a connotation of being non-rechargeable, speaker 2 uses CS to insert the more accurate German term for the rechargeable battery.

Extract 5:
(44) 7 cookin’ for a *freizeit*. she’s cookin’ for a *freizeit*

    retreat  retreat

Extract 6:
(54) 3 all those people that study *pedagogik*. what are they gonna end up doing

    education science

Extract 7:
(150) 4 … she had to bring it to the *werkstatt*. they said they’d probably have to send it in somewhere …

    repair shop

Extract 8:
(605) 2 so d’you take the *akku* out o daddy’s computer

    rechargeable battery

When two similar languages are in contact, CS is often triggered by cognates, as seen in Extract 9. Speaker 7 code-switches to the German *Frust*, the cognate for ‘frustration’. Significantly, the switch is not from noun to noun but from English adjective to German noun. If we imagine Speaker 7 saying, ‘well Daniel, you might get frustrated too if you had a wooden leg’ we could expect her to code-switch the German adjective *frustriert*, which would work just as well. However, she is carrying over the idiomatic noun phrase *einen frust bekommen* and adds an indefinite article to meet the requirements of well-formedness.
As mentioned in the theoretical framework, a speaker’s difficulty of retrieving an item an induce CS. The pause and ‘um’ in Extract 10 indicate that the speaker is searching for the correct word. Her CS shows that the German Behinderte was more retrievable than ‘handicapped persons’. In Extract 11, the speaker code-switches because he does not know the corresponding word in the ML. He does not pause nor search for an English circumlocution but automatically switches the noun.

Some of the intra-sentential CS happens in very short utterances. Line 98 is a short response to the question posed in line 97. Textiles werken is a school subject. Therefore, the CS is triggered not so much by failure to retrieve but by a topic from the domain of school. In Extract 13, speaker 2 answers his own question by reading out loud what it says on the box.
The following long extract was chosen for analysis because the trigger remains elusive. It seems obvious, since Luftballon and ‘balloon’ are cognates, and this may very well be the trigger. What makes it less certain is that speaker 1 used ‘balloon’ previously in the same context while speaking about the same topic (line 239). Speaker 3 repeats the English noun in line 242. It is then that speaker 1 continues to tell the story in lines 246-247 and switches the balloons to German Luftballon. The surface explanation is satisfactory to a certain extent. An emotional component may be involved as well because the speaker is recounting the events preceding the birth of his brother.

Extract 14:
(236) 2 what broke . the water
(237) 1 daddy’s water broke
(238) 3 did you step on a balloon daddy
(239) 1 we always had the step on a the frog but we also know the step on a balloon . you don’t know that right
(240) 4 [step on a what ]
(241) 1 [you were too small]
(242) 3 balloon
(243) 1 you were a little baby
...
(246) 1 how the human mind works … mommy’s water broke when she stepped on a Luftballon right in that corner back there cause we were doin’
(247) around dumb with the Luftballon and then her water broke and it was daniel waitn’ to come out balloon

As seen in extracts 15-17, CS is also used to interject. In the course of the card game two speakers call for a halt by CS in Extract 15. In addition to being triggered by the cognates, the German interjection is a lot shorter and can be uttered more quickly. There is no specific reason for the code-switched interjection in Extract 16 besides a simple preference for the German word. The CS in Extract 17 is listed together with the nouns because the interjections fit in with the previous two examples. In the context of the card game, they are exclamations of frustration. The emotional component may be the reason for CS, though the speakers are known to say ach in various contexts frequently.
Extract 15:
(632) 1 moment
(633) 3 moment

**hold/hang on a moment/minute**

Extract 16:
(200) 1 you don’t sweat less .. *blödsinn* it runs down . that’s why it’s there

**nonsense**

Extract 17:
(545) 6 ach .. no one has sixes or
(552) 1 ach . I should’a kept that ace

**alas**

The last two extracts contain CS that does not conform to the grammatical constraints of the languages involved. In the first example, the school subjects and *zeichnen* and *werken* are preceded by the present indicative plural verb ‘are’. The resulting sentence is nonsensical, both in English and in German. The incorrect verb could be independent of the CS, and it may be due to false word choice. The sentence would convey its meaning by replacing ‘are’ with ‘study’.

Extract 19:
(110) 1 well you know I think why they do that because most of the people are

**zeichnen** and . and **werken** together

**fine art** **crafts**

The topic of Extract 20 is the *Suppenbrunzer*. The item has no corresponding word in English. Fortunately, not everyone present knows what a *Suppenbrunzer* is, and speaker 5 explains its meaning. Code-switches besides the untranslatable noun result from the chosen topic. However, CS in line 354 does not form a grammatically correct clause. It is missing both a definite and an indefinite article. Adding the articles results in ‘in der form von einer taube’, just as it would in an English sentence (‘in the form of a dove’) could rectify this. Another correct version can be achieved by dropping the adverb *von* and adding the indefinite article as in ‘in form einer taube’.
Extract 20:
(349) 5 hey you don’t know the suppenbrunzer
(word explained below)
(350) 6 uhu (negation) what is that
(351) 5 from the mittelalter
(middle ages)
(354) 5 no daniel it’s usually some kind a holy thing like the holy spirit in form von taube or whatever . and you have it over the table and so you in form of dove
(355) have your soup underneath it . and it steams up and so it . um it . um starts .. clinging to the thing and then it when it has enough moisture
(356) it starts drippin down and that’s the suppenbrunzer

The data offer several more instances of code-switched noun phrases. However, the extracts discussed above exemplify how and why the participants used CS to introduce noun phrases into the ML.

3.3.3.3.2 Verbs

Of the eight sentences containing code-switched verbs, seven are in active voice that all follow the same structural pattern. Extracts 22-24 exemplify how the code-switched verbs are embedded into the ML by adding the auxiliary verb ‘do’. The topic in extract 22 is shaved armpits. Speaker 1 points out that girls’ armpit sweat is more visible because there is no hair to absorb it. Before analysing the structure, we should look for a trigger. The most probable reason for switching is the word saftIn itself. It expresses not only the production of moisture but also a seeping oozing flow. That was most likely the image that speaker 1 was going for and he employed CS to relay it. The trigger for Extract 23 cannot be determined. However, the verb aufladen in Extract 24 refers to the rechargeable battery in Extract 8. The German noun Akku is used three times in the conversation preceding the utterance in line 619. This CS of the noun induces CS of the verb.

The structure follows the same order in the following three extracts. In place of the English verb in the respective tense, the speakers insert a German infinite which is preceded by the auxiliary ‘do’. This configuration does not constitute a well-formed English phrase. At first glance, it is not correct in Ger-
man either. However, in the Bavarian and Austrian dialects *tun* can be used as an auxiliary in combination with an infinitive, as in *er tut gerne schreiben* (he likes to write) in place of the more formal *er schreibt gern*. The code-switched verb construct, therefore, conforms to the requirements of well-formedness, albeit in favour of the colloquial Austrian EL.

Extract 22:
(203) 1 that’s why you guys always do *saftln* to produce moisture

Extract 23:
(276) 1 did you . did you do *aufnehmen*. hahaha .. oioioioioi . haha . the grammatical approach to record

Extract 24:
(619) 6 it’s always doing *aufladen* and it’s full already to charge

CS of the verb in Extract 25 is most likely domain induced since speaker 6 probably discussed the topic at school. It may, however, merely be a matter of personal preference. The participants are speaking about the university course of studies *textiles werken* (Extract 12) which has very few students per semester and speaker 6 reports that it may be cancelled entirely. His choice of tense, however, does not fit the predictive nature of the utterance. It may be a simple mistake. However, the presence of the past participle *abgeschafft* calls this explanation into question. Most likely this is not a case of anticipatory CS, and the speaker verb into the rough sentence structure without further consideration. More well-formed renditions of the sentence in passive voice include, ‘It’s probably going to be *abgeschafft* this year anyway,’ and, ‘It’ll probably be *abgeschafft* this year anyway.’ The sentence could also be converted into the active voice to follow the other examples, by changing the subject, resulting in, ‘They’ll probably do it *abschaffen* this year anyway.’ While the sentence does not conform to grammatical constraints of the two languages, the participants, however, have no trouble understanding its meaning.
Extract 25:
(76) 6 it’s probably abgeschafft this year anyway
       cancelled

3.3.3.3.3. Adjectives

In Recording 1, two adjectives were code-switched. Extracts 26 and 27 show how they are both embedded in the ML structure. Their triggers are difficult to ascertain. From the context the respective speaker’s reasons for CS may have been emotional, i.e. speaker 6 is upset because he is not allowed to play computer games and speaker 1 is reporting about being in an embarrassing situation he was.

Extract 26:
(145) 7 no computer daniel .. freckles stay here
(146) 6 yeah always . every . I didn’t even get to play g’scheid today because they turned off the strom properly electricity

Extract 27:
(641) 1 everybody was just sittn’ there and I always get a red head when things are peinlich embarrassing

We have seen that, with a few exceptions, the instances of intra-sentential CS do not violate syntactic rules in either language. Especially nouns are embedded in the ML at the correct place and in the correct form. In the case of verbs, however, the structure surrounding the embedded word was transferred from the EL. The combination of the English auxiliary verb and the German infinitive determined the sentences’ active voice.

Triggers are challenging to identify. In addition to the discussed cognates, CS most often occurs when a participant usually discusses the topic in a German-speaking context. Besides some emotional CS, the rest are probably carried out for no definite reason.
3.3.4. Other Language Contact Phenomena

3.3.4.1. Borrowing

The data include only two examples of borrowing. The words are fully incorporated in the English language, and their use is conventionalised. Extract 28 contains both borrowings and illustrates the use of the Italian musical terms *allegro* and *staccato* in an English conversation.

Extract 28:
(101) 7 you can study [italian at the] mozarteum . [ study at the uni or what]
(102) 2 [mozarteum ]
(103) 3 [no . but textiles werken ]
(104) 1 yeah it’s part of the
(105) 8 yeah . allegro
(106) 2 you can learn how to stitch a …
(107) 8 staccato
(108) 1 stitch in a rhythm .

3.3.4.2. Loan-Shift and Loan Translation

In the two recorded conversations, the participants also engage in loan-shifting. These loan-shifts or loan translations (LT) are often difficult to distinguish from L2 interference. The significant difference is whether they can be reconstructed as translated German expressions. Family members understand the meaning the others wish to convey with these LTs. However, monolingual English speakers, who have often remarked on the family’s idiosyncratic speech, perceive them as interference.

In colloquial German speech, especially in Western Austrian and Swiss dialects, statements are often concluded with a tag consisting of or containing the conjunction *oder* (or). The inflexion of the tag turns the utterance into a question which theoretically calls for an answer. However in practice *oder* is often used without pausing for a response. This tag can be compared to English forms such as ‘isn’t it?’, as in ‘The rain sure is coming down, isn’t it?’ The participants use the LT ‘or’, ‘or so’, ‘or something’ and ‘or what’ more than 20 times. Extracts 29-36 list some of the recorded examples. In most cases, the speakers are not aware
of the LT. Extract 31 is significant because speaker 6 adds the usual tag ‘can’t I’ after the ‘or’. He is aware of the usual English tags and also conscious of the transfer of a German form. All the participants are most likely subconsciously aware of the English form. However, the other examples show that they incorporate the common German tag in their discourse out of habit.

Extract 29:
(397) 6 so if I want that now I say may I or

Extract 30:
(410) 3 now daniel has to dis[card or . Daniel has] to discard or

Extract 31:
(466) 6 and if I have a ten I can take this .. away and put a ten there or .. can’t I . why not

Extract 32:
(297) 2 and do you have any hooks or so

Extract 33:
(160) 2 i thought she was talking about her car or something

Extract 34:
(482) 1 so these count as points or something

Extract 35:
(175) 7 so what does that mean. is that some miracle or what

Extract 36:
(582) 6 and you’re the only one who made points or what

Another frequent loan-shift involving the word ‘dumb’ is used 5 times. It is translated from blöd or from its cognate dumm which have the same connotation of lacking intelligence. However, the German term also has an extended meaning. The German translation of Extract 36 is, ‘Ja, aber das Blöde ist, dass die halben Leute nicht gekommen sind’ and what speaker 1 means to say is, ‘Yeah, but unfortunately like half the people didn’t come.’ However, he cannot just exchange ‘unfortunately’ for ‘dumb’ because they are different parts of speech. Instead, he adds the noun ‘thing’ to create a noun phrase which incorporates
‘dumb’. ‘Doin’ around dumb’ from Extract 37 is a loan translation of herum-
blödeln or blöd herum tun, which means ‘romping’ or ‘horsing around’. The auxili-
iary verb is moved to the front in the same manner as with the code-switched
verbs.

Extract 36:
(45) 1 yeah but the dumb thing is that like half the people didn’t come

Extract 37:
(246) 1 how the human mind works ... mommy’s water broke when she
stepped on a luftballon right in that corner back there cause we were doin’
(247) around dumb with the luftballon and then her water broke and it was
daniel waitn to come out

During the card game, ‘come out’ was used five times and ‘play out’ was
used four times. Both terms are used for playing cards in German. Herauskom-
men (lit. come out) and ausspielen (lit. play out) both mean ‘to lay down a card or
a meld’.

Extract 38:
(409) 1 wait . and so you can come out whenever you want to or

Extract 39:
(467) 3 it doesn’t matter what you play out

Extracts 40-44 offer additional examples for loan translations. In German
there are two ways of asking about someone’s birthday, ‘wann ist dein geburtstag’
(when is your birthday) and ‘wann hast du geburtstag’ (when have you birthday).
In Extract 40 the speaker applies the structure of the latter instead of the former,
which would result in ‘then his birthday must be tomorrow’. ‘Longer still’ in
Extract 41 comes from noch länger and means ‘even longer’. Extract 42 is inter-
esting because speaker 6 uses ‘happens’ at the beginning but employs an LT at
the end of the utterance. What he means is, ‘what happens then’. Instead, he
translates was its dann into English. The second LT is a bit more tricky. A Ger-
man term for going online is ins Internet gehen (going in the Internet). This
could, therefore, be a simple case of interference, i.e. using the preposition ‘in’
instead of ‘on’. However, in English, the use of ‘on the Internet’ refers to content and not to the act of using it. Surfing the web or going online is the correct term.

LT can also be humorous. The amused reactions in Extract 43 attest to the participants’ awareness of the translated idiom. In many other cases, they do not notice an LT. However, in the example, speaker 5 mixes the German and English idioms ‘that’s none of your business’ and das geht dich nichts an, with the hilarious result of ‘nothin’ that goes on your business’.

Extract 40:
(14) 3 then he must have birthday tomorrow

Extract 41:
(172) 4 but anyway they said that it was it worked and now she has it and she can
(173) use it longer still

Extract 42:
(609) 6 what happens if you leave the akku in and you’re in the internet or somethin’ like that .. what is then

Extract 43:
(661) 2 what are you guys talking about
(662) 5 nothin’ that goes on your business
(663) (everybody laughing)
(664) 1 say it again say it again say it loud
(665) 3 susie just said nothin’ that goes on your business

We have seen that what sounds like interference or nonsense to an English speaker is often a translation of an expression that does not correspond to an idiom in English. In some cases, the speaker has to rearrange the syntax to accommodate the LT, which makes the utterance even stranger to untrained ears.

Aside from the recorded data, some of the participants are also known for loan-shifting idiomatic expressions from English to German. Their German-speaking counterparts are often confused by translations of expressions such as Teppichratten (rug rats), du hast dein Bett gemacht, jetzt musst du darin liegen (you made your bed, now lie in it), and du kannst deinen Kuchen nicht haben und ihn auch essen (you can’t have your cake and eat it too).
3.3.4.3. Interference

Besides CS, borrowing and loan-shifting there are also some obvious instances of language interference. By far the most common mistake is caused by lexical interference, in particular, incorrect transfers based on similar sounding words. In thirteen cases the participants use the preposition ‘by’ incorrectly. This interference happens because the preposition *bei* is used in the German rendering of the sentences. The similar sound leads the bilinguals to transfer it to the English sentence which more often than not requires a different preposition. In our examples, the preposition in Extract 44 should be ‘in the commercial’, in Extract 45 ‘with the other one’ and in Extract 46 the preposition is superfluous.

Extract 44:
(210) 2 you know *by* . the *by* the commercials from from um pantene pro-V …

Extract 45:
(380) 2 well there you just have the same number . *by* the other one you have to have the same color . a straight in one color

Extract 46:
(460) 5 so do you hand out new cards *by* every time there’s a new thing …huh

Extract 47:
(22) 8 he’s *legastenic* huh

Extract 48:
(117) 1 it’d also be important to have a heart in your *breast* not um a stone or whatever she has

The last two extracts also contain examples of linguistic interference based on phonological similarity. However, the supposed cognates turn out to be false friends. Speaker 8 pronounces the word ‘legastenic’ in English. However, *legastenisch* is ‘dyslexic’ in English. The German word *Brust* is used for both ‘breast’ and ‘chest’. When speaker 1 uses the false friend, it leads to a humorous case of interference, as seen in Extract 48.
3.4. Summary

The study shows that both early and late bilinguals communicate via CS. By using their full repertoire of languages, the participants’ speech is more flexible. For instance, CS enables them to recount German conversations without translation and to convey meaning for concepts that have no English counterpart. CS also facilitates an uninterrupted conversational flow when difficulty in retrieving items in the base language occurs. Nouns represent the part of speech that is most frequently code-switched. However, the most interesting characteristic is the way the participants include German verbs in English sentences. They do this by changing parts of the syntax to follow the pattern of colloquial Austrian expressions, i.e. by adding the English auxiliary ‘do’ before a German infinitive.

What the participants may be less aware of than their CS behaviour, is the number of loan translations they use in their speech. The data contain translated idioms as well as a high frequency of tags that are based on German forms. The recorded instances of lexical interference represent mistaken transfers into English that are rooted in phonological similarities to German.

From a sociolinguistic perspective, the comfortable manner in which the family members switch languages shows that CS also has a bonding function which reflects their feeling of us-ness and togetherness. Beyond the recorded data, the participants often switch to English to speak to each other in public, thereby excluding speakers of other languages from the conversation. Many exciting topics for continued research remain. For instance, a comparison of the current study to additional recordings of the same participants in a setting including monolinguals and unbalanced bilinguals could yield more insight into inter-sentential CS and could further illuminate sociolinguistic aspects such as language choice and reasons for CS.
4. Code-Switching in the Classroom

For close to a century the monolingual principle has been a leading force in the foreign language (FL) classroom. The underlying opinion, held by many educators, policymakers, and learners alike, is that the use of L1 in the FL classroom restricts the exposure a learner has to the target language (TL) and promotes L1 interference. Many educational policies further this approach by restricting L1 use in the classroom (He 2012). This limitation is also reflected in “[c]ontemporary TESOL methodologies [that] have been characterised by the compartmentalisation of languages in the classroom” (Lin 2013: 521). In an early paper on language distribution in bilingual schooling, Jacobson reflects on the belief that

[b]y strictly separating the languages, the teacher avoids, it is argued, cross-contamination, thus making it easier for the child to acquire a new linguistic system as he/she internalizes a given lesson. [...] It was felt that the inappropriateness of the concurrent use was so self-evident that no research had to be conducted to prove this fact. (1990: 4)

Shin also describes such negative attitudes towards CS in the L2 classroom. In her study, she found that as a result of the monolingual principle, learners “may feel embarrassed about their code switching and attribute it to careless language habits” (2005: 18). The relevant literature refers to the strict separation of ML and TL as two solitudes, parallel monolingualism, bilingualism through monolingualism, separate bilingualism, two monolinguals in one body, etc. (Creese & Blackledge 2010: 105). These terms naturally reflect a critical view of the issues.

More recently, linguists and teachers alike have been challenging the avoidance of L1 in the FL classroom as it “has no straightforward theoretical rationale” (Cook 2001: 410). Butzkamm, for instance, laments the loss of the mother tongue (MT). He believes it is “for all school subjects, including foreign language lessons, a child’s strongest ally and should, therefore, be used systematically” (2003: 28) and backs up his opinion with empirical research (Butzkamm & Caldwell 2009). Since “every new language is confronted by an
already existing MT” (2009: 66), the monolingual principle and its compartmentalised language pedagogy do not take into account the interdependent nature of L1 and L2, nor does it acknowledge the contribution of MT in L2 acquisition. Butzkamm argues that since by “[u]sing the mother tongue, we have (1) learnt to think, (2) learnt to communicate and (3) acquired an intuitive understanding of grammar” our MT can also provide access to subsequent grammars. In fact, he refers to MT as “the master key to foreign languages” (2003: 31, emphasis added by the author).

The paradigm shift, however, has yet to make its way into the mainstream FL classroom and “the teaching implications are difficult to pin down” (Jessner 2008: 38). While some language teachers may already be utilising bilingual methods such as translanguaging or CS in their classrooms, researchers are calling for more multilingual approaches on a curriculum level and more flexible pedagogies that go beyond, for instance, the grammar-translation method and the communicative language teaching approach. In light of this, Jessner explores concepts of language teaching concerned with awareness-raising techniques and, in particular, enhancing the connections between the languages in both the teachers and learners; that is, bridging the languages, creating synergies and exploiting resources. (2008: 38)

The pedagogic potential and validity of CS have been proposed (e.g. Arthur & Martin 2006) and multi-pronged research in this area is gaining momentum. What is missing is more research and literature on how to make CS a teachable resource. However, Arthur and Martin point out that pedagogies based on this research should only be a guide as they will not work in a “mechanistic generalisable way” (2006: 197). Such factors as the languages involved, the participants’ language backgrounds, the teacher’s proficiency, and the social environment make this impossible. Therefore, the response to local circumstances is vital for a bilingual approach in the language classroom.
4.1. Precepts for Constructive Teachers’ Code-Switching

The call for the situation-specific and flexible use of CS in the classroom, however, does not mean that it is to be used indiscriminately. Therefore, we will begin by examining precepts for the constructive employment of CS as a teaching (and learning) strategy. Only then will we take a closer look at possible functions and advantages of CS in the classroom.

A fundamental goal of communicative methodologies is to provide realistic communicative situations in the L2 classroom. As seen in Chapter 2.2., CS is a naturally occurring phenomenon that bilinguals employ to facilitate communication. Therefore, the inclusion of these naturalistic bilingual discourse strategies is legitimate in the language classroom. However, the objective of classroom interaction is not limited to the communication of information. It also includes the learning of a language and the learning of how to learn a language. The discerning use of CS should reflect all of these goals. As Macaro aptly puts it,

[i]f codeswitching is, in effect, the bilingual teacher's compensation strategy for lack of L2 knowledge in the learners it must be made on the principled decision that the benefits of that switch are at least equal to, if not more than, the benefits of not codeswitching. (2005: 80-81)

He then goes on to criticise indiscriminate CS. Though teachers may sometimes code-switch unintentionally, the focus should always be on what benefits the learner’s more. For instance, if CS is merely used as a shortcut to save time, then the retention of new vocabulary or grammatical structures in the learners’ working memory may be diminished. Constructive CS becomes a balancing act that affords a high degree of self-awareness as well as awareness of what the learners would profit from the most. For instance, if a teacher employs CS as a communication strategy, the resulting communication has to be at least as effective, if not more so, than L2 repetition or circumlocution to emphasise or explain. Conversely, overuse and predictability of CS can have the opposite effect. For instance, if a teacher always repeats instructions in the L1 and always summarises explanations via CS, students may begin to ignore the initial L2 utter-
ances. Over time, this selective attention could result in a diminished understanding of instructions and explanations.

The question of how much CS is useful and how much is too much cannot be readily answered. As Macaro points out, directives such as “‘use the L2 as much as possible’ or ‘judicious use of L1’ are not sufficiently informative, especially for novice teachers” (2005: 81). On the one hand, teachers should facilitate extensive exposure to L2 to allow for learners’ language proficiency to grow through the implicit process of inference. On the other hand, a more guided approach may be more appropriate at times. This guidance can be provided by remaining in L2, but also by pointing out specific vocabulary or syntactic structures in L1. A third option is to combine the two strategies by CS in addition to explaining in L2. The guiding principle of the discerning use of CS as a conscious strategy should be, if possible, identifiable learning in L2 as well as facilitating classroom discourse. In the long term, and as the learners advance, CS may then become less necessary (Macaro 2005: 81).

4.2. Functions and Advantages of Code-Switching in the Foreign Language Classroom

The upside to having language teachers who are monolingual native speakers cannot be denied. Their authentic accent, a high degree of proficiency, extensive cultural knowledge, idiomatic speech, etc., are all factors that may contribute to more genuine classroom interaction and benefit the learner greatly. However, the monolingual language teacher does not have access to CS. This lack does not lessen the quality of L2 teaching and learning. The advantage that bilingual teachers have is the option of an additional and potentially useful tool in their teaching repertoire. The following section discusses the prevalent purposes that teachers use CS for as well as a selection of functions and advantages of this supplementary teaching tool.

In a study across various learning contexts, Macaro narrowed down teachers’ purposes for CS to four areas. Teachers reported to use the L1 for “building
personal relationships with learners (the pastoral role that teachers take on); giving complex procedural instructions; controlling pupils’ behaviour; teaching grammar explicitly” (2000: 171). The reasons that teachers gave for CS were predominantly connected to time constraints. In many cases, teacher indicated that they felt guilty when using the L1. The validity of CS because of time constraints is implied in some of the following functions and advantages. However, saving time is not an end in itself but should benefit the learner, as described above.

CS can have a positive impact on classroom interaction. When teachers do not have the option of CS or wish to avoid L1, they will often spend much time on input modification. Such modification can inhibit interaction. In naturalistic bilingual discourse, CS is used as a strategy to avoid such an outcome and to ensure the continuance of the interaction. Input modification, however, interrupts the conversational flow. That is not to say that input modification has no place. In many contexts, it is essential for teachers to elaborate on what they are trying to convey. CS, however, offers the option of shortening the explanatory comments, thus freeing up more time for actual interaction. In Table 4. Macaro lists the characteristics of input modification by the teacher and points out their respective negative effects on classroom interaction.

<table>
<thead>
<tr>
<th>Characteristic of input modification by teacher</th>
<th>Negative effect on interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repeating</td>
<td>Increases the teacher’s discourse space (henceforth ITDS)</td>
</tr>
<tr>
<td>Speaking more slowly</td>
<td>ITDS and makes the discourse less realistic</td>
</tr>
<tr>
<td>Inserting longer pauses</td>
<td>ITDS</td>
</tr>
<tr>
<td>Stressing certain words or phrases resulting in prosodic change</td>
<td>ITDS; provides unnatural models for production; may result in less focus on syntax (see Harley, 2000)</td>
</tr>
<tr>
<td>Stressing certain words or phrases by making them louder than the rest of the utterance</td>
<td>Provides unnatural models for production</td>
</tr>
</tbody>
</table>
Table 4. Negative effects of input modification on classroom interaction (Macaro 2005: 73)

<table>
<thead>
<tr>
<th>Modification Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substitute simple word for complex word</td>
<td>Reduces the lexical diversity</td>
</tr>
<tr>
<td>Substitute cognate for non-cognate</td>
<td>Reduces the lexical diversity and may encourage poor textual decoding</td>
</tr>
<tr>
<td>Exemplifying (a week = Monday, Tuesday, Wednesday)</td>
<td>ITDS; it may also reduce lexical diversity</td>
</tr>
<tr>
<td>Paraphrasing</td>
<td>ITDS; it may also reduce lexical diversity</td>
</tr>
<tr>
<td>Modifying syntax (e.g, by using canonical forms)</td>
<td>Reduces exposure to complex syntactic structures and may affect complexity</td>
</tr>
<tr>
<td>Modifying syntax through fewer subordinate clauses</td>
<td>Reduces possibility of elaboration of discourse</td>
</tr>
</tbody>
</table>

Macaro’s intention is not to lessen the role input modification. On the contrary, he underlines its positive effects on learning and its significant benefits, for instance, by employing it to foster inferencing skills. His goal is to sharpen teachers’ awareness of how much discourse space they are “hogging” and how the overuse of input modification can lead “to ‘the dumbing down’ of the classroom discourse” (2005: 73).

Another advantage of CS in the language classroom is that it may lighten the students’ cognitive load. Macaro bases this theory on research that shows learners using the strategy of thinking in L1 during reading comprehension tasks to their advantage. He applies this principle to spoken discourse and points out that “the teacher’s codeswitching can help counter the cognitive constraints imposed on working memory limitations” (2005: 74). In this manner, CS can reduce the attention that is necessary to process the selected bit and thus free up more capacity to deal with more substantial portions of input. Simultaneously the code-switch facilitates the quick storage of a potentially new L1-L2 counterpart.

In reading and writing exercises language learners often have the use of a bilingual dictionary at their disposal. In spoken discourse, this resource is not
readily available, even though the fast-paced interaction results in a higher cognitive load. The advantage of having a bilingual code-switching teacher is that learners always have access to a living breathing bilingual dictionary. During a conversation, learners can turn to their teacher for a corresponding word. Additionally, the teacher has the option of being an active dictionary. Through selective CS, the teacher can implicitly point out when it is beneficial for learners to consult a dictionary. In this manner, the teacher both lightens the learners’ cognitive load and casually teaches them the useful metacognitive learning strategy of judicious dictionary use (Macaro 2005: 75).

While the grammar-translation method as the sole mode of language instruction has long been scrapped, translation tasks nevertheless provide learning opportunities. For example, teachers can resort to translation and CS to demonstrate reading strategies. One possible approach is for teachers to simulate their own thought process while reading a text. They can voice possible inferences, suggest when to use a dictionary, point out contextual and syntactic clues, and exemplify which parts of the text they skim as well as sections to which they return. Translation also provides opportunities to indicate negative transfer of L1 structures to the target language. Furthermore, translation can also be carried out collaboratively. The class can translate a written text in cooperation with the teacher in a group think-aloud protocol. This free exchange poses a significant advantage for the teacher, who can thus discover the pupil’s reading comprehension strategies. Simultaneously, the students learn from their shared approaches, and the teacher can assist in the further development of their reading skills. For teachers who do not offer such synergetic code-switching translation sessions, insight into the learners’ actual comprehension process is more limited. Monolingual teachers can elicit a learner’s knowledge and ability through true or false and multiple-choice comprehension tasks. However, they cannot assist learners in their personal strategies of comprehension as well as a code-switching teacher can, who also allows the students to code-switch.
4.3. Example for the Use of Code-Switching in the Foreign Language Classroom

Before moving on to the role of CS in Content and Language Integrated Learning (CLIL) we will take a look at a more in-depth example for employing CS strategies in the FL classroom. The goal is to elaborate on different options that FL teachers can choose from when faced with similar situations. To make it more naturalistic and authentic, the example is presented in the form of an internal monologue.

✳✳✳

Let us imagine a fictitious situation in which I wish to convey the following information:

I’m going out on a limb here, but yes, I’ll lend you the money for your project.

My first option is to assume that the pupils are not familiar with the idiom ‘to go out on a limb’ and I avoid the phrase by CS to German. This results in the utterance:

Ich lehne mich hier weit aus dem Fenster, but yes, I’ll lend you the money for your project.

In bilingual speech, this is a realistic example for CS. The advantage of the German alternation is that it promotes communication. However, in the FL classroom setting it robs the pupils of the chance to learn the idiomatic expression of ‘going out on a limb’. Also, there is no possibility for inferring its meaning from the context.

My second option, also under the assumption of unfamiliarity, is to pre-empt by paraphrasing the idiom. However, the following rendering of the sentence again does not contain the idiom.

I’m risking a lot, but yes, I’ll lend you the money for your project.
If I merely wished to communicate the meaning of the utterance, this would be a perfectly good sentence, and I could move on from here. However, I am determined to find a way that does not circumvent the idiom.

Option three is just to go ahead and say what I want to say and then go back and repeat one of the first two options. That way the pupils will hear the idiom, and I still have the choice between employing a possible learning strategy by paraphrasing or a communication strategy by CS. The former has the advantage that it may initiate the learners’ inference strategies to determine the exact meaning of ‘going out on a limb’. They may make some connections in the L2 and may even arrive at a conclusion, that ‘out on a limb’ is figurative for ‘far away from support’, that is, if they know what a ‘limb’ is, which they probably don’t. By the time one of the pupils gets around to asking I’ll probably have moved on. The latter, CS, does not call for inference at all, though it may involve a heavy cognitive demand to backtrack to the auditory loop of ‘going out on a limb’ after I finish my code-switched sentence. It will help if I code-switch closer to the initial utterance.

My fourth option, therefore, is to code-switch immediately after the idiom in question, as in:

**I’m going out on a limb here . Ich lehne mich hier weit aus dem Fenster . but yes, I’ll lend you the money for your project.**

This strategy will allow for a stronger L1/L2 connection and may even build up cultural associations. Maybe this path will even allow access to L1 schemata which could facilitate rapid storage and lighten the cognitive load. The disadvantage of this course is the loss of a chance to stimulate inference strategies.

My final option will require some planning. It has great potential if I get it right. The plan is to combine all of the above, thereby activating the highest amount of connections and bolstering them for future recall:

**I’m going out on a limb here .. I’m risking a lot .. Ich lehne mich hier weit aus dem Fenster .. but yes, I’ll lend you the money for your project.**
The key is to emphasise the connection between the original utterance and the subsequent paraphrase and CS. I can do this with gestures or facial expressions and short pauses. The short pauses should be long enough to allow time for initial processing of the unfamiliar phrase, and for L2/L2 as well as L1/L2 connections to be made, but not too long. Ideally, these combined strategies should result in the long-term storage of the new idiom. I will make a note to use the expression again soon.

✳✳✳

From this example, we can see that bilingual teachers have an advantage of choice and that the various options each have their respective merits. The judicious use of CS, however, demands a high degree of concentration as well as a great deal of decision making on the part of the bilingual teacher (Macaro 2005: 78-80). Many of these decision can be made in advance. It is advisable, especially for novice teachers, to map out such elaborate uses of CS in their lesson plans. Whenever possible, spontaneous CS should be monitored to avoid overuse and predictable patterns. Co-teachers may be of particular help in identifying such patterns.

4.4. The Use of Code-Switching Strategies in Content and Language Integrated Learning Classrooms

The use of CS in the context of CLIL is treated separately from the FL classroom because of the method’s emphasis of teaching and learning the content of the respective subject (e.g. history, geography, science, etc.) in the foreign or second language. Although the use of L1 in CLIL or other immersion based classrooms is still controversial, it is nevertheless widely used, even in contexts where teachers are cautioned not to use the L1 (Lasagabaster 2017: 252). In his early study of CLIL, Butzkamm describes CS as a “necessary conversational lubricant” that “could never be banished from the pupils’ minds” (Butzkamm 1998: 95). Since pupils often think in the L1 and use strategies of mental transla-
tion to understand content, selective CS is a valuable strategy to reinforce L1/L2 connections. Ferguson adds to the discussion by stating that if the “principal aim is to ensure that pupils understand the subject matter” then “whatever reasonable means contribute to that goal merits sympathetic consideration” (2003: 46). His research confirms the widespread use of CS in CLIL situations, and he suggests that

CS is not only very prevalent across a wide range of educational settings but also seems to arise naturally, perhaps inevitably, as a pragmatic response to the difficulties of teaching content in a language medium over which pupils have imperfect control. Moreover, because teaching is an adrenalin-fuelled activity, making numerous competing demands on one’s attentional resources, much switching takes place below the level of consciousness. Teachers are often simply not aware of when they switch languages, or indeed if they switch at all. (2003: 46)

According to this statement, CS in the CLIC classroom is carried out for pragmatic reasons and as a reaction to the heat of the moment. Additionally, the attentional management of resources is a major issue when conveying the subject matter in the L2.

However, CS is not only used to help explain content but also for classroom management. Baker cites two reviews on the matter. Summed up, teachers use CS to “signal the start of a lesson or a transition in the lesson, to specify interaction with a particular student, or to move from teaching content to classroom management” (Baker 2011: 286-7).

Learners also initiate CS, mainly when asking for clarification, for translations and conversations with other learners within small group work. Baker points out that a student’s choice of when to use which language is reasonably consistent and patterned. It usually reflects the teachers stated preference of language, the pupil’s proficiency and “a negotiation between teacher and child” (Baker 2011: 287). Teachers’ language choices tend to be more child-oriented, especially in the initial years of CLIL schooling, for instance, for explanations or to check on understanding.

As to how CS can be strategically used to enhance the CLIL process, teachers have much the same range of possibilities as described in the previous chap-
ter. While CS also should not be employed indiscriminately in CLIL contexts, there may, however, be a shift towards more content-related CS.
5. Conclusion

We began by providing a theoretical framework for the analysis of the case study, starting with the topic of bilingualism. An overview of historical and current views and definitions for bilingual speech introduced the topic and led us to distinctions of type and degree of bilingualism. After discussing the two primary paths for developing bilingual ability, we turned to the question of how multiple languages are stored as well as the advantages and disadvantages of proficiency in more than one language. Finally, the topic of bilingualism was rounded off by describing different constellations of bilingual families.

The second theoretical chapter examined language contact phenomena with a focus on CS. We identified various forms of code-switching. In particular, we discussed the features of grammatical, neuro- and psycholinguistic, and sociolinguistic aspects of code-switching, as well as language interference and borrowing, thereby laying the groundwork for the analysis of the data.

The case study contains the analysis of the transcriptions of two recorded conversations of an English/German bilingual family. The research questions were concerned with how frequently the participants engage in CS, which types of CS they employ and how code-switched items are integrated into the structure of the matrix language. In some of the examples, possible triggers are discussed. The majority of code-switches are inserted nouns. The switching of most of the verbs, however, was more complex. Thereby, the participants combined an auxiliary verb with a German infinitive, a structure which occurs in Bavarian and Austrian colloquial German. Participants also engaged in loan-shifting, and the data show some instances of lexical interference.

The final chapter challenges the purely monolingual approach to language teaching and calls for more flexible pedagogies involving awareness-raising techniques that strengthen connections between languages. It stresses bilingual teachers’ advantage of having CS in their toolkit that, if used judiciously, can be an effective teaching device for teachers as well as a productive learning strategy for pupils. To this end, CS in the classroom should be guided by the basic
principle of what benefits the pupils most. A discussion of a selection of various functions for CS in the LF classroom follows, along with their advantages. An extensive example then gives insight into a code-switching teacher’s options and flexibility, followed by a brief subchapter on the use of CS in a CLIL context.
Bibliography


1 ok now you wanna see a nice fat artery here. all nice and cooked
2 are you gonna eat that
3 sure
4 not gonna kill him
5 a bit off elastine. get some good [skin ]
6 [sounds] like Noel. you gonna eat all a that
7 what you want some of it. oh was that by the. weihnachtfeier
8 by ERG, well every time we went out to eat. hey you gonna eat all a that
9 what he wanted some all the time
10 well he always finished first then he watched everybody else eat
11 ich bin der kaiser du bist nur der könig ich bin erster ich bin fertig … [how can] you call your kid noel
12 8 [hey dog]
13 well he was born on christmas day
14 then he must have birthday tomorrow
15 it’s better than calling him Christmas. weihnachten hehe. hallo weihnachten
16 6 or santa
17 5 or mary ]
18 [well] paul read leon because he read it backwards
19 6 what
20 lois had these blocks. these blocks with letters on them. and they were on top of each other and they spelled noel and. uncle
21 paul asked whos leon
22 he’s legastenic huh
23 well he knows leon the profi .. leon. he’s the new boyfriend of. whoever
24 8 can I have some water please
25 this kind or normal or whatever or
26 6 or tap [water or regular tap water or tap water from a regular regular regular] tap
27 3 [steve hans peter did you hear from lucy again cause she must be here]
28 talked to her mother
well she just wrote me an email. said she’s here she’s been here for a week
she’s here she’s been here for weeks
8 who
1 Lucy
7 Lucy Miller
1 and she
is in Vien[na first ]
1 [she might] come for a day for a day
3 oh really
daniel can you give me the water please
2 think I saw her the last time when she lived here
6 just a second
6 why does she always . never come to us . hardly . she always goes somewhere else
1 well she’s doin she’s workin for that
6 boondocks [camp ]
7 [cookin’] for a freizeit . she’s cookin’ for a freizeit
1 yeah but the dumb thing is that like half the people didn’t come
8 oh no
3 and the cool thing is that you . you go to college . and you have to pay off your debt after and you don’t even wor you don’t even work in the thing that you actually learned
1 I mean they’re happy if there’s twenty people and they thought there’s gonna be forty
7 well you think of how many people [are gonna do that in life there’s gotta be . fifty percent people not workin in the ]
1 [college builds character . you learn how to drink gallons . you learn how to .. ] I don’t know what
7 there’s certain things [that are not jobs that ]
6 [barf litres .. skinny dip]
3 all those people that study [pedagogik . what are they gonna end up doing ]
2 [jean said as long as you have an education they’ll] train you or sompm like that .. they don’t want specialists
1 yeah but that was
7 well you know like the daughter of adele did that but she wanted to work with um behinderte that was her goal
3 yeah if you have a goal to do something like that it’s good anyway but a lot of people just study because they don’t know what to do
2 [I was pre law and I ended up in the pharmaceutical business]
7 sorta like studying history
1 yeah well pre law ok that’s good because that’s you can use that anywhere
7 uh anybody want more noodles daniel noodles
6 mm I have enough noodles
1 how are you doin’ daddy you workin hard on your food
8 yeah
3 it’s funny what um what’s her name was telling us um martha cause they’re only five in her studiengang
1 [puttin to much stuff in it]
8 [no I thinned it down with some more soup]
1 [I saw you were] labouring
7 who’s that
7 who
3 martha
1 who’s martha [oh really] that interesting I can’t believe they don’t take more
5 martha hofinger or jahn or whatever they’re called
6 it’s probably abgeschafft this year anyway
3 [she didn’t change her name I doubt it anyway
1 definitely not
6 definitely not
4 no she’s called hofinger
8 yeah not in that case
2 who
1 the [one with the zits]
4 [martha hofinger]
7 oh come on
6 the pimple girl that hates me now
2 she took some kind of pills
1 didn’t help
7 yeah but it didn’t work . came back
1 well I mean its hard to . what do you say the one that was [used to some time be a friend of sarah’s]
7 [well there’s only one martha that’s not ] . I [mean we know [it’s youneward]
5 [she’s still a friend of sarah’s ]
1 no she’s not . there’s the one . [there’s the one that’s black ]
3 [hey lets stop this conversation ] on . I was just talking that there were [only five people in her studiengang ]
6 [that said . that said she was two years in
2 her mother’[s belly that she could] say that [she’s older than ]
2 [what’s she studying]
3 [textiles werken ] and Italian
2 in salzburg
3 mozarteum
7 you can study [italian at the] mozarteum . [ study at the uni or what]
2 [mozarteum ]
3 [no . but textiles werken ]
1 yeah it’s part of the
8 yeah . allegro
2 you can learn how to stitch a …
8 staccato
1 stitch in a rhythm .. {song song song song (singing)
6 dun dun dun dun dun (singing) }
1 well you know I think why they do that because most of the people are zeichnen and . and werken together
2 like Kreiger
6 zeichnen and werken . you don’t have to know anything .. zeichnen and werken
113 1 well you have to be able to do stuff you have to be creative
114 2 like hyra
115 6 like hyra haha
116 7 yeah haha
117 1 it’d also be important to have a heart in your breast not um a stone or whatever she has
118 7 it’s funny that she’s still there after all the years
119 6 she’s still alive
120 1 she must not sell enough. she must not be good [enough for the market ]
121 3 [that stone she has must] be workin pretty good
122 8 who. who’re you talkin’ about
123 3 well he said you have to have a heart and not a stone
124 6 hydra
125 1 well she’s not the nicest people person that I know
126 6 hydra
127 1 cut off one head and three come back
128 6 yeah
129 5 daddy eva was at the youth group and she said that she likes it at Adlsmaierhof and that she’s doing good there
130 8 eva’s workin there
131 7 she’s a patient there fred [. a patient ]
132 3 [yeah but you work there too mommy]
133 7 well yeah but there’s people that work there with the patients and there’s patients and workin
134 3 I don’t think that daddy would think that she’s working there and helping people or
135 1 she was going ludludludludludludludludlu chchcheht
136 6 what
137 7 who knows I don’t know
138 1 she talks with her hands while she’s driving. [and it was snowing]. well it wasn’t snowing
139 7 [heide does that too]
140 3 well she doesn’t drive fast I’m glad about that
And every time I've driven with her she takes her hand off the wheel at some point. Well, I'd be nervous anyway. It's not just everyone who's totally nervous, but she does it even though she's nervous. I don't know maybe she didn't notice her doing it. 'cause no computer. Daniel, my friend.

Yeah, always. Every time I didn't even get to play g'scheid today because they turned off the strom.

Anyway, daddy, with her leg that she has you can only get it every five years and if she can use it for five years then she can get the next one. She'll get will be a real good one. A new kind with a new technology.

Okay, somebody make a plan for the day… excuse me. Naptime. Coffee. Walk. It would work, but it broke. And she had to bring it to the werkstatt. They said they'd probably have to send it in somewhere and it would take a while. But it would be so dumb if she'd only be able to use it.

And Christmas tree. [hm?]

Yeah, well those you wanna take a nap can take a nap and we'll do the Christmas tree.

I think she's talkin' about what is she talkin' about?

Prutese. Proootherese.

Four crutches and one leg now, in the winter. So she prayed about it. And when they came when she came to there, ah, when she got there to ask how it looked, they said, I didn't know. I thought she was talking about her car or somethin'.

I didn't know how she had a whole knee. I thought she has just the part somewhere here.

Well, it goes way up to her hip.

[Sure.]

[Well did someone run over her hip or somethin']

[They can't explain it.]

[But][some. for some reason it's not broken any more]. It works.

Mhm. When she was three years old or somethin'.

Who.
1 and they had to take the whole leg off... oooh
2 oh eva. I thought you were talking about antia
3 and before it they told her they’d never had anyone ruin their knee so bad [in the time she had it]
4 because she threw it down one time when she was mad and then. but anyway they said that it was okay and now she has it and she can
5 use it longer still
6 [well she happened to have a little kolla and threw it]
7 so what does that mean is that some miracle or what
8 [well it is] they say first that it’s totally broken and they might have to send
9 [miracle max]
10 [well if they say .. they can’t fix it themselves]. they have to sent it to vienna. then she comes back a few
11 days later. and then they said well weird the other guy. somehow. what. it wasn’t busted
12 mhm
13 I mean naturally [you can say that some stupid] guy. some stupid guy who didn’t look at it right but they were people that work with that
14 every day I don’t know. I don’t know
15 [I think that was miracle max]
16 well daniel you might get a frust too if you had a wooden leg. you might
17 peg leg
18 I’d call you peg-leg
19 hi peg-leg. wos is des wos hoast peeg leeg
20 ok. we’ll clear the table. [those who want to take a nap can take] a nap.. daddy already [looks a little blurry eyed]
21 [daniel has hair underneath his arms]
22 [daddy has hair underneath] his what
23 I said daniel has hair underneath his arms
24 it’s part a life
25 I know. he’s [becoming a man]
26 [susanna doesn’t]
27 yeah well susanna would have it
28 do men ever do that
1 yeah gay people.. and swimmers
2 yes
3 well you sweat less[... blödsinn it runs down]. that’s why it’s there
4 [I mean it doesn’t stink as] bad
5 oh
6 that’s why you guys always do saftln
7 I do anyway
8 o oh
9 aha
10 plus people with a bald head sweat a lot more and you see it.. you know you always [see the.. and chris when he eats]
11 [or else it goes on the hair and the] hair has a huge
12 oberfläche and it can chchcht
13 you know by the by the commercials from from [um pantene pro-V the hair is this this thing and it looks] like a [schachtelhalme stickin] out
14 [hans peter do you wanna take over this conversation] [do you wanna take] a
15 nap do you wanna take a walk. those who wanna do the christmas tree
16 so the water goes into the hair
17 or do we need josh here
18 1 no what. what about him
19 2 what about bob
20 7 yeah I need someone to organize it
21 2 organize what
22 1 um well I think we should do something. we should read the stories. that’s very important. but that’s not now
23 7 no that has to [be dämmerung]
24 1 [we have to wait]. yeah
25 2 you mean wait till four o’clock
26 (loud coughing: inaudible)
27 5 are we gonna watch a Christmas movie or not
6 the grinch
3 the grinch
4 a Christmas carol
6 no the grinch. the grinch
8 so how do you turn it around this stuff
(clearing the table, total chaos: not comprehensible)
8 it broke. look at that
7 what broke
1 you have to wait twelve hours
7 what
1 and if the baby doesn’t come within twelve hours you have to do somepm .. ok daddy
2 what broke. the water
1 daddy’s water broke
3 did you step on a balloon daddy
1 we always had the step on a the frog but we also know the step on a balloon. you don’t know that right
4 [step on a what ]
1 [you were too small]
3 balloon
1 you were a little baby
5 the other day Maxi Rass says. boa erinnerst du di no wann die gretti bei euch woa .. she just says it like that. that was when I was a baby
and I can’t remember but I just thought it was so funny. an des hob I jetzt grod denkn misn wia I di gsegn hob
1 how the human mind works … mommy’s water broke when she stepped on a luftballon right in that corner back there cause we were doin’
around dumb with the luftballon and then her water broke and it was daniel waitn to come out
5 hm
1 you probably had a nine ten ten on the APGAR scale
2 the what
1 you know. cause we were learnin how you do. how you check the baby when it comes out
2 mhm
1 and when they’re a little blue then they get a nine .. but its nothing . it’s not any big deal . a lot of people have that …but little . it was pretty interesting to learn things because then I figured out a little things a few things about . ahh . what’s her name . ruthy and when they did the stress test and everything and they looked if she could make it . you know have a normal birth and why they did why they did a caesarean and stuff .. interesting

8 daniel .. daniel

6 what

8 would you let . a .. hans peter help you with your german please

3 he’s really excited about it daniel

5 he has this grin on his face

2 [I copied my CV from Josh]

6 [he should drop it to his butt]

8 daniel . you heard what I said

6 yeah

2 you can drop your grin to your butt

1 what .. what can I do

2 he said you can drop your grin to your butt

1 oh

2 (laughing) I don’t know how that works though . you have to be sideways

6 who said that

2 you just said that

6 I didn’t say that

2 you said you can drop it to your butt .. daddy said hp has a grin and then you said he can drop it to his butt

6 (laughing) [I didn’t say that ]

1 did you . [did you do aufle]hmen . hahaha .. oioioioioi . haha . the grammatical approach

2 well it was after they started . anna said something that sounded so wrong so I had to go get it

7 susanna can you go get a cloth and wipe off the table please

5 are you gonna play it to us then

2 maybe
6 the funny things
7 are you gonna get another friedenskerzen in here so it doesn’t. [run out]
1 [so we don’t fight
7 I have all these candles that Joshua made. [they were those triangle ones and] I never used them
2 [there’s nothing like the holidays]
1 oh yeah
2 is this. mommy these are for outside or. aren’t they
7 well you can use them [inside or outside ]
2 [aussenlichterkette]
5 last time. last year we had it on the balcony
2 well did you put em back like this again
1 yeah
2 were you bored
5 it wouldn’t fit in the box if I didn’t
2 well I just left mine up
1 and whenever he turns it on it’s christmas
2 and do you have any hooks or so
1 do you know we were being recorded
4 no
1 (laugh)
5 (laugh). but not any more or
1 I don’t know
5 I guess I’ll have to watch the whole time when I speak. as I speak
2 it’s s’posed to be natural. it's not s’posed to be .. weird
4 now I wonder what I was talking about before
2 you don’t say anything. you just sit there
6 yeah she’s thinking. she’s in love
5 wait until you are
6 what are you in love too aha I know with lidlidlidlidlidlidli
2 what carlos
5 (laugh)
2 weirdo
6 (laugh)
2 he’s coming tomorrow maybe
5 he was there on sunday
2 who does he mean who do you mean
6 I’m not gonna tell you lidlidlidlidlidlidi
4 [what did you say] [I don’t talk] I never say anything
5 [he said um]
2 mommy daniel said that she’s in love with carlos
5 laughing
6 I didn’t [say that]
2 [Carlos is] like fifty five or sixty
4 talkin about carlos daddy’s friend
5 daniel’s sayin lidlidlidl I’m in love withlidlidlidl and he said I’m in love with carlos daniel said [that I like ryan lovel]
2 [I said that you don’t] say anything
2 sarah… well why is he a lidlidlil
5 daniel said that
2 well he’s brown
5 (laugh)
2 but he’s samoan brown not indian brown
6 oh
2 oh same difference
6 haha yeah
2 so do you have any hooks to hang this up
5 you just wrap it around whatever is around there
I don’t wanna do it in here.

D’you wanna do it on the balcony or? I just stuck it in between slits in the balcony … we have two packages of em so it doesn’t matter you can put one inside and one outside.

2 All steamy in here.

Yeah, because you put a lot of steamers in here.

5 Its because we don’t have a suppenbrunzer in our family.

2 Nobody ever did that.

5 What.

6 What’s a suppenbrunzer.

2 Hans Peter did ofnbrunzn but not suppenbrunzn.

5 (Laughing)

6 (Laughing) .. suppenbrunzer.

5 Hey you don’t know the suppenbrunzer.

6 Uhu (Negation) what is that.

5 From the mittelalter.

2 There’s a song. Do you know the suppnbrunza . [the suppenbrunzer] . the suppenbrunzer.

6 [the suppenbrunzer]

5 No Daniel it’s usually some kind a holy thing like the holy spirit in form von taube or whatever. And you have it over the table and so you have your soup underneath it. And it steams up and so it. Um it. Um starts [.. clinging ] to the thing and then it when it has enough moisture it starts drippin down and that’s the suppenbrunzer.

6 [peeing down]

6 Freckles lets hang you up then you’ll be our suppenbrunzer.
2 okay. the game goes like this . the first time you get twelve cards okay. the first time what you [have to have is two pairs ]

[did you do austeiln for me too]

6 2 you didn’t say you wanted to play
6 I said I wanted to
6 you asked me how the game goes
6 well he does wanna play so
6 3 how many can play
6 he can talk too. one two three four five six seven eight
6 thank you
2 the first time you need two pairs .. and then the next time you need a pair and a straight. and the time after that you need two
straights and after that you need three pair and so on
3 and that’s . a pair [is always ] . um . four cards
2 [or whatever]
2 3 three
2 3 three
1 [a pair is ]three cards
2 [no .. four]
2 wait.. that’s a good question. not a pair whatever . [um]
1 [rem]ember the J is the B and the Dame
3 a quartet
1 Q is the D okay . just so you know
2 well there you just have the same number. by the other one you have to have the same color . [a straight in one color ]
3 [and how many of the same]
5 three
1 how big is a street . straight
2 a straight is four and a . pair or whatever what do you call it
3 set
2 a set . right . that’s a good idea .. a set is three
2 [you start] out. you have to lay down six cards to come out and then the next time you have to do seven. it's a straight and a pair. and a set.

... okay so the way it is.. anna would start this time. you do this and if you want it [you can take this one or this] one.. if somebody else wants it they can may I [for it. you can may I three times ..] take it yourself

[I can take that. yeah right]

[yeah. and then I can say no an take]

[confusion: inaudible]

6 so if I want that now I say may I or

3 I have to discard right

3 [in the ] whole thing

2 no .. in the whole. well per hand [you can] may I three times

[per hand]

6 so if I want that now I say may I or

3 I have to discard right

3 [in the ] whole thing

2 no .. in the whole. well per hand [you can] may I three times

[per hand]

6 so if I want that now I say may I or

3 I have to discard right

6 no you have to do that before

5 oh . I didn’t know that

2 you have to discard to

2 then you discard one yeah. so you always have the same amount cause [or else]

6 [may I]

2 if you may I then your not [allowed to discard]

2 if you may I then your not [allowed to discard]

3 [wait wait she has ]to say yes or no

6 may I

2 um no you don’t take everything daniel you just take one. you [take] the top one

[wait]. and so you can come out whenever you want to or

1 [wait]. and so you can come out whenever you want to or

3 now daniel has to dis[card or . daniel has] to discard or

[when its your turn ]

2 no he doesn’t . if you may I you don’t discard

3 oh

2 and then you can play on other people’s things when they. when they come out
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<th>Line</th>
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<td>1</td>
<td>oh. okay ... well I can just come out if I want to right away or</td>
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<td>well you have to pick one</td>
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<td>so two [pairs] is four cards or six cards</td>
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<td>two six cards</td>
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<td>well and then no he has to discard and the way it works with the counting up I can't remember so the losers get bad points but</td>
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<td>and the other ones are all five I think and jokers are twenty</td>
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<td>daniel you don't have to may I its your turn</td>
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<td>you don't have to may I just take it</td>
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104
1 sets. it’s not called pairs it’s called sets
2 yeah but then a set would have to be. I don’t know.. well a set is four and a street is three
3 well look
4 no. doesn’t go like that .. cause you start out. you have to have six cards to come out and the next time you have to have seven
5 no this card you pick up dani
6 hey could I play five six eight
7 no now it’s two sets .. it the whole thing that you always have to do the same thing
8 hey could I play five six eight
9 no now it’s two sets .. it the whole thing that you always have to do the same thing
10 no
11 by a straight . yeah
12 it does
13 by a set not . by a set it doesn’t go
14 I know. but . so it can’t be a king of hearts and a queen of
15 daniel you have to discard
16 good to know
17 so do you hand out new cards by every time there’s a new thing ..huh
18 yeah . sure
19 okay . then
20 because you have to . the one who has . gives . gets rid of his cards first wins . the other ones are minus points
21 this okay
22 you can’t
23 [and if I have a ten I can take this .. ] away and put a ten there or .. can’t I . why not
24 it doesn’t matter what you play out]
25 I don’t think so
26 sure
27 its not rumikub
3 wait. I have to discard
5 oh yeah
6 well still
6 they all have to be different don’t they
2 no
3 daniel
5 it’s two different sets of cards
2 you have to wait your turn
1 what you can’t
3 not the first time
1 oh
1 so th[ese count] [then as points or somethin’]
6 [may I    ]
3 [you don’t have to may I    ] when its your turn daniel
3 now another one dani
5 now another set. no you [can’t    ] [ . you have to play two sets at once]
2 [another set]
3 [you have to play both at once    ]
2 [you can’t take another one    ]
3 [you can’t pick again    ]
1 just wait a little bit. it takes a bit o time
6 well next time I can’t get that five anymore
3 [well then you maybe    ]. look if you have something else . discard
1 [well there’s other times]
6 I don’t. [I only have] two of one
5 [shshsh    ]
3 daniel we didn’t [play out] yet either . so
2 [discard]
3 may I remember there’s two sets of cards in the whole thing so there has eight of every card. every number
2 there’s still jokers
6 oh
2 everybody has the real cards and the real thing. whatever these are die echten alten
can you put out other sets than two
2 no. that would be nice
1 mhm
6 wouldn’t it be logical if you could do this tauschn. if you put a ten there you take the joker
5 it’s your turn daniel
2 that’s not how the rules are daniel
1 yeah I [was ] by those card games [the rules]
2 [as far as I know] [ I can’t even remember if the jokers are sposed to be in it
1 yeah
3 that’s for example not good to [throw away cause here I had ] one out already and then he gets out quicker
2 [I take this .. and then I lay this]
1 okay
6 yeah
1 whatever
3 um
2 anybody want any queens
6 hah. there’s five queens
1 hey you have to watch out what’s been played out
1 I’ll just tell you that you won’t ever take a queen if your smart
6 why
1 why. because there’s no way you have enough queens to even play. there’s five behind each other. if you had all the other queens in the game then you’d have three .. there’s more. there’s six so there’s no way you could even. well
5 well. you don’t know what I have anna
2 she has a bunch a pairs .. I think
5 he has to throw [away ]
1 [daniel]
5 yeah . no . whatever
1 good
2 now you have [to discard ]
6 [now I can ] play on other
3 no you can’t . you can’t by the first time . it’s the next turn you can play on other ones
2 maybe I’ll be out now . haha
6 wait . aah
3 that’s the same thing
1 yeah
2 you have to be able to discard to be done
3 yeah I know
6 is it m[y turn]
3 [daniel]
6 can I play three eights out now
2 no
6 ach .. no one has sixes or
3 mhm
6 so I discount . card my eights or sixes or what [cause] no [one has it ] out
3 [yeah ]
1 [six or eight]
3 now we’re playin’ .. uno
6 oh good
1 ach . I should’a kept that ace
2 (murmuring: not understandable)
6 can I play three at one time
2 not now
6 well then
2 yeah
6 hah. you could’a played it here
5 well I’m not allowed to play it yet
2 she probably can play evrything somewhere
3 your turn daniel
2 no. hans peter has to discard
3 oh
2 [you have to pick]
3 [you have to pick] first
6 oh. shoot
1 it’s not a big deal. well just pick. he picked something
2 he picked a two
1 so that’s it
2 I’m out
3 yeah
1 what does that mean now
2 [now everyone counts] I think these are all five and from ten up they’re ten and the ace is fifteen and the joker’s twenty
3 [that you count your points]
1 what. [you] count your own pile
5 [ten]
2 [no you] [count your] hand
5 [twenty]
3 [in your hand]
6 I have two
3 no five. everything is five till ten
6 and you’re the only one who made points or what
[no he didn’t]. the other one have minus points
2 [no he didn’t]
3 can you please hand em . pass em over here
6 five
5 forty
1 I have three
2 three cards
1 three points
2 five . everything’s five up until ten
1 oh . I thought you said what it says on it .. so I have one card with three points on it . so that’s fifteen
2 no [that’s five]
4 [that’s five]
2 every card is five points
1 oh . I didn’t [hear that ]
3 [every [card] is five point till ten and then everything is ten and a ce is] fifteen and
2 [well you said . you said three so I thought you had three cards]
1 oh . okay
dumb to shuffle because they’re different sizes
mhm
1 you know
6 what
I’m not slow
2 so d’you take the akku out o daddy’s computer
mhm (affirmative)
2 cause he didn’t like that
1 he didn’t like it . well he should like it . cause if he doesn’t . whatever . its just gonna get .. he doesn’t know much about anything
6 what happens if you leave the akku in and you’re in the internet or somethin’ like that . what is then
1 no if you’re always [using it ]
[then they hack into] it and use your *akkus*. Yeah well, if you have a computer where you can take it out it's smarter to take it out, especially if you just bought a new one.

If you have it plugged in all the time, watchin' DVDs and stuff it will ruin it and it doesn't help anybody. Well he doesn't know that.

How many does everyone get? Twelve. It's always doing *aufladen* and it's full already.

I was hoping I could play a straight because I had the ace the [king and the queen]... and that button on the bottom is to see how full it is or... I don't know but everything pairs. Every card I had was a... some kind a pair card.

Sorry.

He has to say sorry.

Put the thing in there... okay now. A straight and a set.

So say it again exactly what it is.

A set is three of a kind. And a straight is the same suit. Four in a row... and it can be like... two ace king queen.

So you can go up and down too or what.

May I... go ahead.

May I... moment.

Moment.

(whisper) Take it. I need it... there's no two ways about it.

Hey... um... how did you guys like the *auflösung*.

What was the *auflösung*? If you win you're [a loser or what]... it was ok but then the problem was that he forgot the right CD and he put the wrong CD in...
5 yeah he forgot it at [home]
1 and so but some kind a song. and within a few minutes he had to decide and it was a. dumb because it was just
didn’t. everybody was just sittin’ there and I always get a red head when things are peinlich
2 what. what did he do
1 started sweating. I thought that’s stupid. it’s a ugly and stupid song. but he didn’t understand it so it doesn’t matter. it wasn’t [stupid]
3 people didn’t understand it. then it doesn’t matter [anyway]
2 [well most]
1 yeah I mean [it was about some couple that] [had been li][ing together long and wasn’t marr][ied and] real nice
5 [you just took it away or what]
2 [no I didn’t]
5 [you would’ve. is it my turn now]
2 [may I]
5 um. yes
3 take it. he wants to have it
5 well I don’t need it. you can have it
6 [she’s too fat for me]
3 [it’s too fat for me]
5 ah. now I would a need it
3 hahaha
2 would a needed it
1 well you wouldn’t know if you did
2 she would a need it. but I have one question. what are you guys talking about
5 nothin’ that goes on your business
(everybody laughing)
1 say it again say it again say it loud
3 susie just said nothin’ that goes on your business