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Language attrition and code-switching among US Americans in Germany

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1. Introduction

The use of two or more languages in conversation is very common in immigration contexts. When immigrants learn a second language (L2) in their host cultures, the acquisition of the L2 often influences their native languages (L1s). This influence often manifests as language attrition, the non-pathological loss of the native language due to emigration and the related lack of exposure to the mother tongue (Köpke and Schmid 2004:5). Native language retrieval problems can then arise on lexical or structural levels since the L2 lexicon and structure are more readily available to the immigrant speaker. In addition to L1 attrition, L2 language items often get inserted into the L1 speech for socially motivated reasons. Code-switching in immigration contexts is the simultaneous use of, for example, L1 and L2 in discourse, where cultural and social meaning is often attached to the language choice immigrants make (Schely-Newman 1998:97; Scheu 2000:133). The differentiation and combined investigation of code-switching, which is socially motivated, and language attrition, which is predominantly a psycholinguistic issue, is a new and important approach to the analysis of bilingual data. In research so far the one area has hardly taken note of the other (Walters 2005).

This article attempts to close the gap identified here as it investigates, in a connected way, functional aspects of code-switching and identifies selected socio-demographic factors that affect immigrants' lexical attrition. It reports on a study that applies a triangulation of qualitative and quantitative methods on a corpus of multilingual interviews with thirty people who had immigrated to Germany from the United States between 1964 and 2001. This paper discusses the overall distribution of occurrences of code-switching and lexical attrition across the corpus and sheds light on how code-switching and lexical attrition correlate with identity-related factors such as English language-related professions, social contact with other Americans and the length of residence in Germany (quantitative approach). On the other hand, it shows how intercultural identities are constructed through the employment of code-switching (qualitative approach).

In this paper, I firstly provide a brief theoretical discussion of code-switching and lexical attrition. Secondly, I give a functional analysis of the bilingual language use among Americans living in Germany. Thirdly, I show how extralinguistic, identity-related factors

correlate with the bilingual data and I discuss the relevance of distinguishing between code-switching and language attrition in intercultural identity research.

1.1 Social identity related motivations for code-switching

Contrary to the common belief that speakers employ code-switching due to laziness, their ineptitude at producing an utterance in one language, or the need to fill lexical gaps with items from the other, there is very often a symbolic value in switching to another language. Thus, the choice of one linguistic variety is symbolic for a multilingual speech community, as it designates the way in which one language is valued in relation to others. However, the choice of a language is not in itself the social message; rather it might indicate one or more interpretations that are attached to that choice (Myers-Scotton 2006). Thus, besides the meaning of the utterance, the code choice carries some extra meaning, which is allotted to the language. In other words, language ideologies associated with languages with particular social preferences, provide a context of presuppositions that give code choices significance. Hence, code-switching in conversation draws upon language ideological assumptions to index social matters such as ethnic identity, power and prestige, solidarity, distance and social relationships.

1.2 Metaphorical and situational code-switching

Blom and Gumperz (1972:409) were among the first to theorize social functions of code-switching. They identified two types - metaphorical and situational code-switching - and stated that "situational switching involves change in participants and/or strategies, metaphorical switching involves only a change in topical emphasis". Thus, situational code-switching refers to a switch evoked by a change of the conversational context, i.e., the situation or a participant. Metaphorical code-switching can be understood as a rhetorical device in which the speakers employ the switch for communicative effect. Further, Gumperz (1972:82) introduced the concepts of 'we-code' and 'they-code', which refer to the bilingual communities' ethnic language and the dominant societies' language, respectively. This concept of 'we-code', associated with informal and in-group activities, and of 'they-code', associated with formal, out-group activities, has been used by researchers whose analyses "rest on naïve social theory which presents concepts such as agency, action, identity and social role as non-problematic" (Sebba and Wootton 1998:262). Gumperz had not intended this static identification and was misunderstood in that he conceptualized this linguistic group identity as symbolic, and not as a prediction of usage of either in- or out-group language. In the analysis of the data of this study, it will become clear how the reality of employing German (they-code) and English (we-code) are transversed.

1.3 Pragmatic models for code-switching

Myers-Scotton's work (1995a, b) on functional and structural constraints of code-switching has been highly influential. In her Markedness Model (Myers-Scotton 1995, 2006), it is assumed that speakers use the code choice that will give them the best outcome in terms of what the communicative event can achieve. As in semantic terminology, "unmarked" refers to what is expected in a speech community and "marked" refers to what is unexpected. Myers-Scotton differentiates four types of code-switching:

(i) "Sequential unmarked choice" refers to inter-sentential switching from one language to another due to a change of setting of a conversation. The sequential unmarked choice is comparable to Blom and Gumperz's (1972:62)

transactional or situational switching. "Sequential unmarked choice" indicates that a specific language is expected to be spoken in different social contexts.

(ii) "Switching as unmarked choice" indicates that code-switching itself is the expected means of communication in a bilingual community. For example, in one Norwegian community, greetings and inquiries about family and friends would be in the local dialect, whereas business transactions would be carried out in Standard Norwegian.

(iii) "Switching as marked choice" refers to switching from one language to another to negotiate solidarity or power relationships, similarly to Blom and Gumperz's (1972) metaphorical or non-situational code-switching for rhetorical effects.

(iv) Finally, "switching as an exploratory choice" (Myers-Scotton 1993:142) refers to code-switching in situations where no unmarked choice is obvious.

1.4 Language attrition and identity

Research on language attrition overlaps with research on code-switching in that some theoretical frameworks, such as Myers- Scotton's, are often used in both research fields. Also, in both fields the simultaneous use of two languages, L1 and L2, is investigated. However, language attrition research focuses on loss or retrieval problems on structural and lexical levels. Research on code-switching, on the other hand, does not focus on the loss of L1, but rather on the simultaneous use of L1 and L2, the structures of such simultaneity (for example, insertional and alternate models) and its functions (for identity, pragmatics, etc.). In both fields, different theoretical and methodological frameworks are used so that various approaches shed light on different aspects of language attrition (Köpke and Schmid 2004).

Even though a quantification approach to lexical aspects of language attrition will be taken in the fourth section of this paper, the focus and relevance for the speakers' cultural identity remains relevant. Aspects of cultural identity that were investigated could be related to several psycholinguistic aspects that have an effect on language attrition. The age of departure from the home country, which initiates the onset of attrition, has been shown to have an effect. The younger a child is, the more likely it is that the L1 will be replaced by the L2 when changing the linguistic environment. Also, a higher level of education often coincides with more explicit linguistic knowledge and less interference of the L1 in the use of the L2. The length of time since the onset of attrition and the extent of contact with the L1 are additional relevant factors influencing attrition. Equally important are motivational aspects such as a desired L1 in-group identification.

2. Methodology

2.1 The data

In 2003 and 2004, I conducted and transcribed 32 biographical sociolinguistic interviews with citizens of the United States residing in Germany. The interviews were semi-structured, making use of questions such as "What was your life like when you first moved to Germany?" and "How do you experience going home to the US?" Further interview questions resulted from the context provided by the informants. In addition, the participants answered questionnaires regarding their socio-demographic background. The interview length varied from 20 minutes to approximately 2 hours, and from 1,924 words to 15,357 words. The interviews were transcribed in their entirety, resulting in a corpus of approximately 200,000 words (see Du Bois, in press).

2.2 Demographic information on participants

Demographic background information was collected through the distribution of questionnaires. The participants all signed a form of consent for the recording of the interviews and to agree to be (anonymously) cited. The participants in this study were Americans who immigrated to Germany as adults aged between 21 and 51 years; their average age was 33 years. The group of informants represents an extreme case sampling, since they had wide ranging backgrounds in regard to their length of residence in Germany, namely between 1.5 and 39 years, with a mean of 14.7 years (see figure 1).

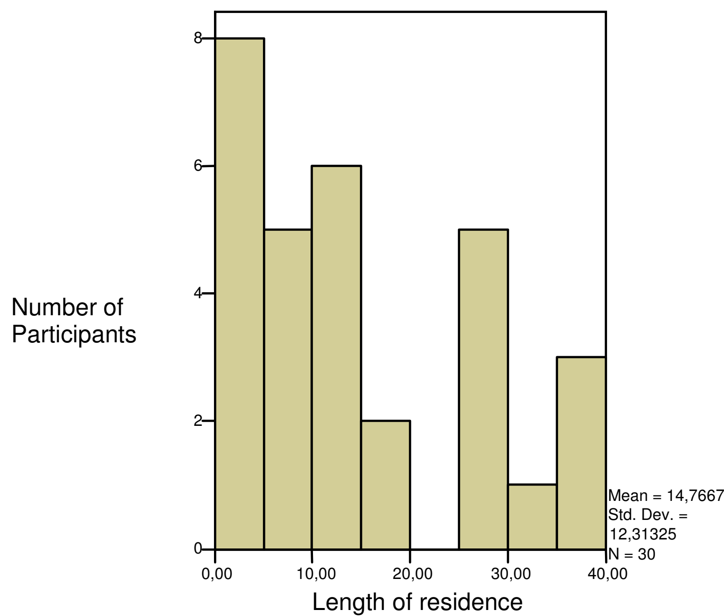

Fig. 1. Length of residence at the time of the interview

The overall participant group has a high level of education: 30% have an MA or PhD, 50% have a BA degree and only 20% have a high school degree only (see figure 2 below). The level is significantly higher than the average in the USA where only 10% of the population have an MA or PhD, 27% have a BA and the majority (57%) have earned no more than a high school certificate or some college credits (U.S. Census Report 2005).

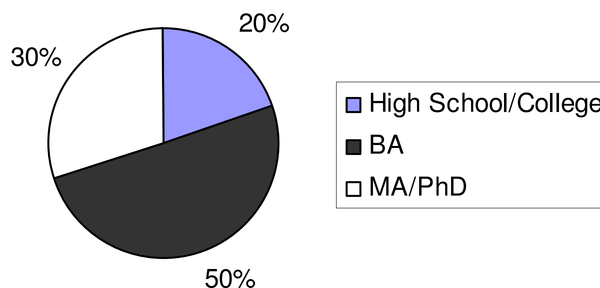

Fig. 2. Level of education of participants

To provide for variation, the American informants also vary significantly in age (from 32 to 79 years), social status (unemployed, janitors, English teachers, carpenters, former diplomats, and wealthy individuals) and ethnic background (European American, African American, and Jewish of European descent).

2.3 Transcription symbols

CAPS	Stressed syllable/lexeme
@	Laughter
?	High rising intonation
<all>	Fast speech
(2.0)	Pause in seconds
((coughing))	Paralinguistic or nonverbal acts
[office hours]	Translation

3. Analysis of functional aspects

3.1 Necessary loanwords and borrowings

The present analyses focus on the functions of code-switching for the cultural identities of the participants. The excerpts could be interpreted and analyzed in many ways. One of the semantic fields where code-switching occurs most frequently is one that uses linguistic elements that designate German institutions such as government offices, infrastructure and/or the educational system. In these fields borrowing terminology from L2 German occurs as frequently among the very recently arrived immigrants (from 1.5 years of residence) as it does among those who have resided in Germany considerably longer. Consider the following example.

Example 1

Marie[1], 35 years old, moved to Germany with her husband and two little children two years before the interview.

Int Uh (1.0) Have you found anything specifically DIFFICULT to cope with about German culture or

Ma Uhum yeah the uhum (1) I (2.0) I can count on my hand the number of negative experiences that I have had here

Int Um

Ma I've had very few negative experiences and my friends as a WHOLE have been very helpful to us

Int Nice

Ma We had uhum a relocation manager help us with a lot of the bureaucratic paperwork details

Int Uhuh

Ma that one needs to go through. So we haven't had to deal with THAT initially **but** there was one time when I tried to get *Kindergeld [money all parents in Germany receive from the government for each child]* and the woman at the *Jugendamt [government office for children's issues]* was very unhelpful and that was I think the WORST experience that I have had and sometimes I get frustrated because I don't know because uh I am not very strong with the language and I am not very

knowledgeable of the SYSTEM and so with the combination of those two it's hard to get uh the information that I NEED or to make sure that I get what I WANT Uhum another so at that particular instance I went to the *Amt* to get uhum registered for *Kindergeld* for our older son

Int Yeah
Ma and I and the woman said, this letter was sent out ten MONTHS ago you're really LATE you don't have the right PAPERwork I can't help you and she was very negative and very rude about it And then uhum I went to get uhum a *Kitagutschein [certificate granting a city subsidized kindergarten place]* for my older son and (--) the people were VERY NICE but I was frustrated because I had to go twice I went once to find out where I needed to go and then by the time I got that information they their uhm *Sprechstunde [office hours]* had ended
Int uhm
Ma so then I had to wait and then I had to come back another time
Int So they sent you out because the *SPRECHstunde* was
Ma = Well the guy was no longer there
Int Oh OK
Ma and so they're open from 9-12 and by the time I I got there maybe at ELEVEN and by the time I got through waited in line and got through to somebody they said no you need to talk to somebody else he had already gone to lunch because the *Sprechstunde* was over so that sort of things is FRUSTRATING but it's not knowing the system and it's not knowing the language just a combination of things

Int Yeah
Ma But other than that you know not any major difficulties

In responding to the German-American interviewer's question as to whether Marie had had any difficulties in adjusting in Germany, it is only in Marie's fifth turn that she directly addresses a problem she encountered in Germany. It is in this fifth turn that she also employs the code-switching into German. The delay in the direct answer to the interviewer's question is partially a result of a politeness strategy and related indirectness, in that she attempts to diminish her criticism of bad experiences in Germany (House 1996:20). This seems to be because Marie ascribes German membership to the German-American interviewer and believes she might be offended by a negative answer to the interview question. Therefore, Marie rather describes the scarcity of such instances, and the help she had received from friends and from the relocation manager. Only after this does she directly address the problem she experienced, which co-occurs with the introduction of the single word code-switch to German *Kindergeld*. Notably, she also concludes by saying that she had not had "major difficulties", which tends to be a US-American style of criticism, in which criticism is padded with mitigating comments.

Marie's employment of German in her fifth turn is meaningful as it reflects new German concepts and the new system she has learned to deal with. It is not surprising that Marie code-switches the lexemes *Jugendamt*, *Kindergeld* and *Kitagutschein*, as these represent context-

specific entities and concepts that have not been lexicalised in American English. However, she also uses *Sprechstunde* instead of *office hours*. Her usage of the German equivalent not only emphasizes her disappointment with the strict time frame the German civil servant had, it also represents a contrast to what Marie might have expected, which is something that was not so difficult: "that sort of thing is FRUSTRATING but it's not knowing the system and it's not knowing the language just a combination of things."

3.2 Code-switching and reported speech contrasting positions

The following example shows how code-switching is employed in a multilingual narrative and how cultural values are attached to the respective languages.

Example 2

Dan, 55 years old, moved to Germany 30 years before the interview.

Int so what were some other difficulties you had um interacting with German people when you first came here

Dw I've always been very open (.) very little just little things like (.) you cannot take things back to the store if it's not any good returning things

Int That changed though

Dw I know and I helped change it the first week back the first week over um I was sitting there with my future wife um that I married 3 years later I think um we opened some cheese up and the cheese was all mouldy- it wasn't sposed to be it wasn't Danish blue or anything and I couldn't believe it and I said I'll take that back and she says "Ne ist Pech" *[No it's bad luck]* you know just a problem just bad luck I said "What do you mean bad luck?" and I said I'm gonna take it back to the store I have the receipt and she said "No-one does that here" and I did it and there was no problem (.) so my wife has sort of a post-war always had a sort of post-war mentality of "Man tut das nicht" *[One doesn't do that]* You don't do that you can't do that when we had we wanted to go to Finland we had the tent I wanted to put the tent up in her parents' yard which was all rented apartments in Bergedorf and "Das kannst du nicht machen" *[You can't do that]* you can't put the tent up there because the neighbors would get upset 'cos it might kill the grass I said "For an HOUR?" so it was my wife telling me things that you shouldn't do because the neighbors wouldn't like it or certain things and I couldn't I couldn't believe that and I did a lot of returning in Germany and I almost made it a sport just because I was told that you couldn't do it (.) but I've I tend to I tend to respect cultures and if something makes sense to me I'll go along with it (.) things like you know bad cheese and so on I could not uh accept @ without taking it back to the store

In this excerpt, the interviewer asks if the participant had difficulties with Germans when he first came. Dan contrasts his own attitude with that of his wife many years ago. He narrates two incidents in which he acts and thinks differently to his German wife, who simultaneously represents German values or, more specifically, a certain German generation's mentality ("post-war mentality"). Thus, the way Dan sets out to position himself in this narration as someone who "helped to change" an aspect of German society is realized very effectively through contrasting his own (American) position in English with that of his wife in German. His wife's reported speech in German coincides with the representation of her German values that Dan does not agree with. Schely-Newman (1998:97) finds that a multilingual narrator

exploits "different values allotted to the various languages" and that switching is the main discourse strategy through which the narrator is able to reinforce group solidarity with the listeners. He code-switches effectively by taking on different roles and characters of the stories he is narrating.

When Dan switches to German in representing his wife's speech – "Ne, das ist Pech!" – the formulaic expression represents a strong cultural force and finality, a statement that could easily be the end of the conversation, if one assumes a general agreement as to what bad luck one has to accept. The reported speech now continues in English, he contrasts his own activity of *not accepting (Self positioning)* something that is not right – the moldy cheese they had bought – with his wife's *resignation* and *acceptance (Other positioning)* of this unfortunate event as something that cannot be changed. Dan questions his wife and the very meaning of "bad luck", representing his *narrated I*. His "narrated I", who does not accept negative facts (the moldy cheese) and does something about it (takes the receipt to return it) and succeeds (the moldy cheese is taken back), is backed up through his language choice in L1 English, even though the actual conversation might have taken place in German. The contrast to his wife's opposition becomes weaker when the reported speech is in English ("no one does that here") than if we contrast it with a hypothetical German "Keiner macht das hier." Thus, even though the positions have not changed in Dan's narration, the interactant in his story, his wife, represents less of a cultural "wall" that sets rules and borders for what he may and may not do. Sure enough, he successfully acts against the suggestion of his wife as a cultural insider, concluding and attributing her way of doing and thinking as a German "Man tut das nicht"[2] post-war mentality that she has always had.

Dan attributes a cultural-generational value, now rather outside of their situation, to his wife's behavior – what Dan calls the post-war "Man darf das nicht" mentality. This mentality is further exemplified by a ban on putting up a tent on the lawn of an apartment building, because the neighbors would not like it. These are German values Dan did not conform to ("I did a lot of returning"), since he did not perceive them as making sense.

4. Statistical analysis

The statistical analysis of my research focuses on issues of the bilingual lexicon, predominantly building on the findings of studies on code-switching and language attrition which identified the lexicon of bilinguals to be more vulnerable than the morphosyntax (cf. Köpke and Schmid 2004; Schmid 2002). Many studies subsume code-switching under language attrition. I do not agree with this approach because the distinction is necessary and meaningful. Code-switching is not necessarily a sign of language attrition and, clearly, not all language attrition is manifested as code-switching; they are two different phenomena in bilingual speech. Language attrition manifests as (sometimes temporal) forgetting of elements of the mother tongue. Code-switching manifests as a more socially motivated and identity-related issue. Porte (2003:117) acknowledges that

> episodes of interference tend to function at the subconscious level, and are intrusive because the speaker is unaware that he or she is producing features that do not align with established monoglot forms. … other code-manipulation might operate nearer the surface of consciousness in that it tends to manifest itself more in situations where it is meaningful to the interlocutors.

The distinction between these levels has been conceptualized into the two categories "psychological and sociopragmatic motivation" (Walters 2005:11). In the statistical analysis that follows, the extralinguistic variables from the demographic questionnaire (length of residence in Germany, educational level, extent of contact with other Americans) were correlated with the linguistic variables (code-switching, lexical attrition). Further, the dependent linguistic variables were also correlated with each other (e.g., the amount of usage of the pronoun "we" as it refers to German or American groups was correlated with the amount of usage of code-switching and language attrition). The table below shows the distinction between code-switching and lexical attrition

Table 1. Code-switching vs. lexical attrition

Lexical attrition/ Psycholinguistic issues	**Code-switching/ Sociopragmatic motivations**
Semantic transfer/loan translation **Example 1** Peggy, in Germany for 39 years, conversation about an American boyfriend Going or coming coming to this country Because at the time when I had met my ex-husband I HAD a **friend** *(German: Freund)* already and I think she didn't really like him she did a lo:t to sort of separate us	**To show ethnic or group solidarity, familiarity, empathy with the listener** **Example 2** Craig, in Germany for 4 years I went back for a visit in December 2001 and people were saying to me oh you're going back to New York you gonna go to ground zero for me priority number one was basically to see friends and family that's that's always a priority to me it's like uh if I don't have enough ***Heimweh** *(English: homesick)* to go back to the United States * *Heimweh haben- to be homesick*: this could also be regarded as lexical attrition/semantic transfer and was coded for both - the distinction is in rare cases not clear cut.
Metalinguistic statement about inability to retrieve a word **Example 3** Elise, in Germany for 39 years, talking about her daughter but not my daughter she's now 21 but she was about 18 at that point (.) and then she hung she worked at the video shop and so on and worked with old people for a year **in a an elderly like a hostel I don't know exactly what you would call it now**	**To indicate a change in setting, role or topic** **Example 4** Sharon, in Germany for 25 years I dunno maybe 10, 15 years from now when all of us are retiring (laughter) how much all of us would be going back and forth I don't know (.) I honestly don't know um but the whole (2) **soziales NETZ** *(English: social network)* that we have built up is something that I have here that gives me a lot of security and I wouldn't really be willing to part with that at the moment and I certainly wouldn't be willing to part with my job uh cos I've GOT a job and I've got a nice job and I've got a job that PAYS relatively well (.) um I don't think I'm adventurous enough to say goodbye to all of that to give it up and go to relative job insecurity in the States

Word retrieval and fluency difficulties **Example 5** Peggy, in Germany for 39 years, talking about her son at the moment he's also in the entertainment branch and he's doing **lighting illumination illuminator**	**To repeat a word or phrase; to translate** **Example 6** Sam, in Germany for 29 years for me although I wouldn't want to live in Berlin it's a **Baustelle a construction zone** and a very bit hectic like New York which I don't want to have anymore, it's probably an age question too
False starts, repair in L1 **Example 7** Sam, in Germany for 29 years you know these are things there's just nothing like this in America look at the the **Schwangersch- the pregnancy leave** *(correct: maternity leave)* woman -You had a child no you were studying?	**To emphasize a point, focus, show contrast, quote someone** **Example 8** Robin, in Germany for 25 years They said "**Nein das geht nicht**" *(No, that is not possible)* and I said "WHY not?" You know and I had lived here so long and I didn't know it but my kids somehow knew- and they were still pretty little- that you didn't have the birthday BEFORE.
Strategic borrowing **Example 9** Mickey, in Germany for 25 years I wasn't suddenly singing entirely different things in Germany than I was singing in America I was writing the same kind of music (.) and uh even as the **Germans say: the Fachausdrücke** *(technical terms)*	**Cultural role/position** **Example 10** Max, in Germany for 19 years I moved here with my German girlfriend so I was immediately sort of integrated into HER family without being able to see from the outside what a **Schwiegersohn** *(son-in-law)* is supposed to be or not supposed to be and when my marriage broke up I had a sort of allergy to being a son-in-law

4.1 Dependent variables

All interviewer speech was eliminated from the interviews, and a word count of interviewee speech was performed on each interview. The bilingual data were subsumed in two categories: lexical attrition and code-switching. I used the Matrix Language Frame model (Myers-Scotton 1995a, b) and counted all Embedded Language Islands (EI), i.e., switches into German rather than single words. In this manner, all occurrences of code-switching and lexical attrition within each interview were counted, then separately divided by the word count of the complete interview and finally multiplied by 1000. Thus a type-token frequency of code-switching and lexical attrition within a stretch of 1,000 words from each interview represents the linguistic material that is illustrated in the figures below.

4.2 Code-switching and lexical attrition data

4.2.1 Social Contact

The questionnaire asked the participants to indicate the amount of contact they have with other U.S.-Americans. A sufficient number of participants had absolutely no contact with other Americans, so that a statistical test was performed to compare the two independent samples (t-test) "No social contact with other Americans" and "Some social contact with other Americans".

The scatter plots in figures 3 and 4 show each speaker's frequency of code-switching and lexical attrition in relation to the extent of social contact with other Americans.

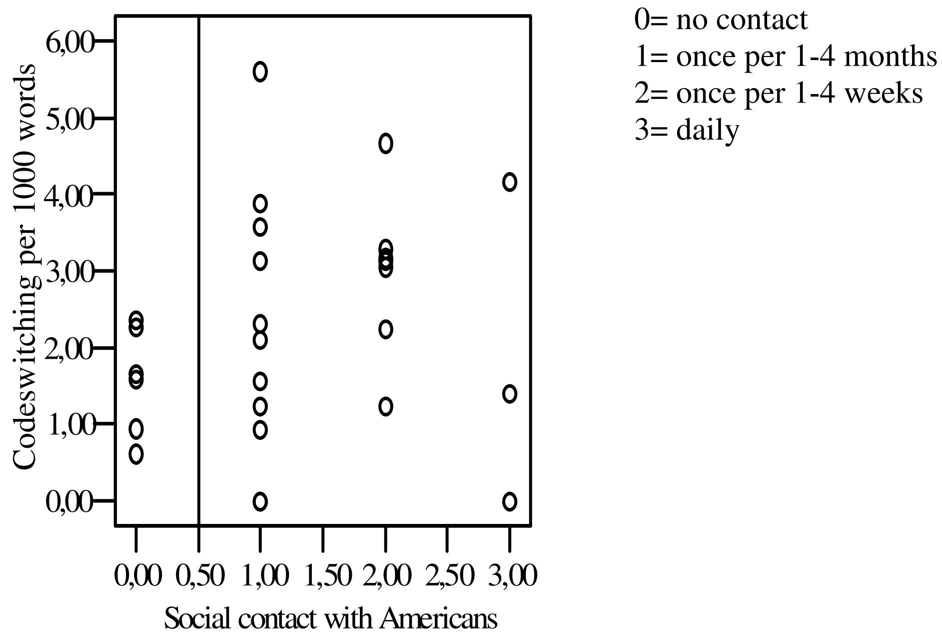

Fig. 3. Code-switching and social contact

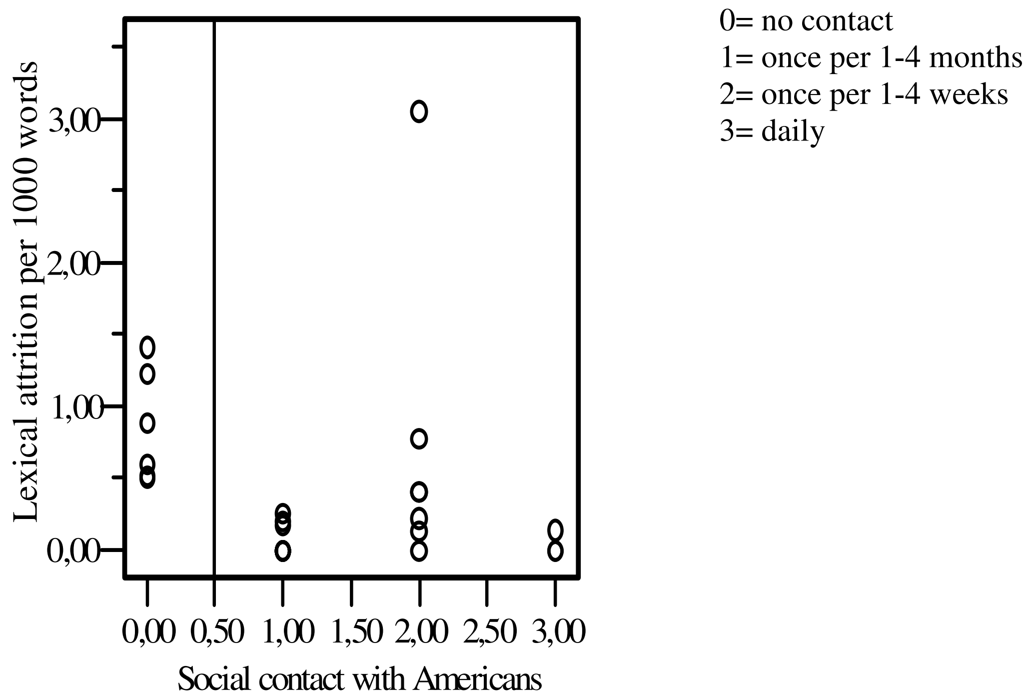

Fig. 4. Lexical Attrition and social contact

The factor "social contact with other Americans" is one of the independent variables with significant outcomes for code-switching and lexical attrition. As Figure 4 shows, the lexical attrition overall is significantly higher among those participants who have no contact with other Americans. In Figure 3 the amount of code-switching overall is lower among those participants who have no contact with other Americans in Germany.

This might be a result of the fact that Americans who have relatively regular contact with other Americans code-switch more as an unmarked choice (Myers Scotton 2006), while it is less common to code-switch for those who do not speak to other Americans in Germany. Another explanation for this phenomenon may be the fact that it indicates a "we" code: speakers who have contact with other Americans in Germany converge to the new community's code in which code-switching and convergence/attrition sometimes coincide (Gumperz 1982; Sebba and Wootton 1998). Gumperz (1982:66) states that "this association between communicative style and group identity is a symbolic one: it does not directly predict actual usage". Hence, the German-American code-switching occurs more often when the Americans have social contact with other Americans.

However, those Americans who do have social contact with other Americans in Germany show very little lexical attrition – close to 0 occurrences per 1000 words. This suggests that the American immigrants who use L1 English more often, experience considerably fewer problems in retrieving English lexical items.

4.2.2 Language-related profession and code-switching and lexical attrition

To find the difference of the mean values between those participants who use English in their professions, like English teachers or translators, and the group who do not, a t-test was performed. It is hypothesized that frequent professional contact with English will result in less language attrition. However, the t-test results indicate no conclusive differences between the lexical attrition and code-switching of the participants who worked with English in a professional context and those who did not ($t=1,57$; $df=25$; $p> 0.5$).

This is surprising, since one could expect that professional contact with the language would diminish language attrition or that language professionals might code-switch less. This lends some support to a finding of research done elsewhere, notably by Porte (2003), on the L1 attrition found among long-term-resident English language teachers in Spain. However, Porte (2003:117) made no distinction between code-switching and lexical attrition – all was considered L1 attrition and there was no alignment with "monoglot norms".

4.2.3 Levels of education and code-switching and lexical attrition

This research indicates no relation between the level of education of participants and their code-switching. However, there is a significant difference between the level of education (which was divided into three levels: High school, BA/college and MA/PhD) and participants' lexical attrition, as is shown in figure 5.

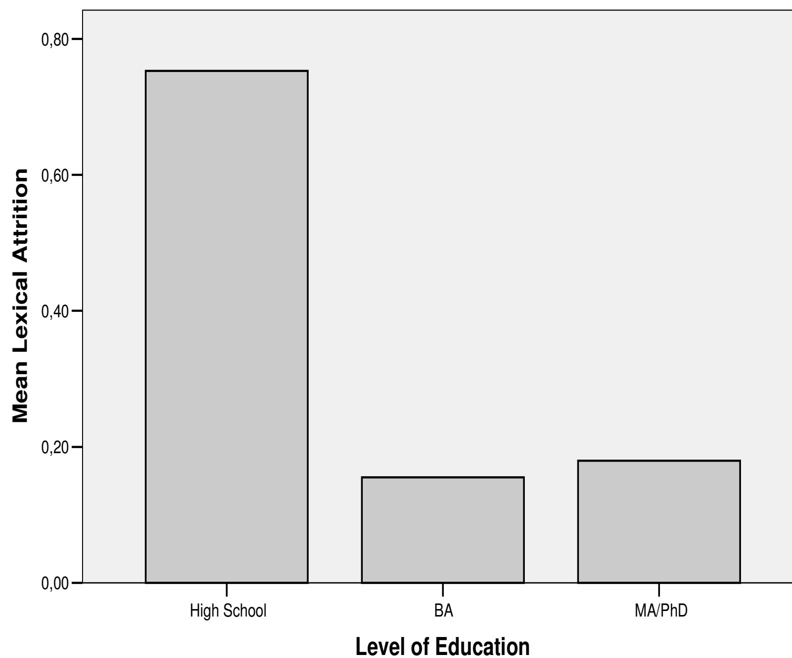

Fig. 5. Lexical attrition according to level of education

The degree of lexical attrition is significantly higher among those with a high school diploma than among those who have university degrees (df =14; p < .05). Participants who have a high school degree tend to work in lesser-paid jobs and as a result do not have the financial means to return to the U.S. as frequently as those with university degrees. Often, the college-educated participants also read more in L1 English, and therefore exhibit a lower rate of loss of lexical items in the L1.

4.2.4 Length of residence and code-switching and lexical attrition

Figure 6 uses the temporal factor "length of residence in Germany", which provides a simulated diachronic view on L1 development in this migration context.

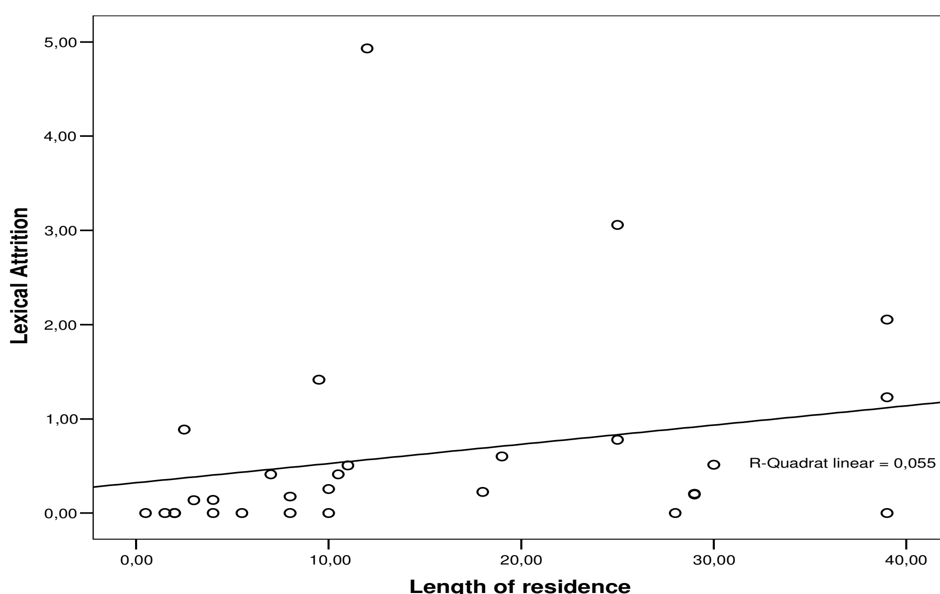

Fig. 6. Length of residence and lexical attrition

There is a significant correlation between the Americans' length of residence in Germany and the lexical attrition. The longer the Americans have been living in Germany, the higher the degree of measurable lexical attrition. This indicates an increased tendency to immerse and indulge in the German language over time, since the long-time immigrants do not retrieve L1 English as fluently as the newly arrived immigrants. This outcome was not surprising, since over time there has been less contact with L1 English in their country of origin. The correlation, even though significant, however, is relatively weak. Attrition is also related to other factors, such as age at arrival and social contact, as we see in the different analyses. Further, there is no significant correlation between code-switching and length of residence. This again might be due to individual preference to use German for narrative or identity-related effects.

Among German Jews in Anglophone countries, Schmid's (2002) study found that length of residence was not positively correlated with language attrition, and that the opposite was actually the case. The longer the immigrants had lived in Nazi Germany, and hence the shorter their residence in an Anglophone setting, the more language attrition had occurred. Schmid's conclusion was that the degree of the trauma a person had experienced was related to stronger language attrition, thus indicating a psychological need to take distance from the traumatising context, also linguistically. In this study, one participant, who was heavily traumatized due to physical abuse by his stepfather and had experienced further problems in the U.S. due to his sexual orientation, exhibited the strongest language attrition of all participants. At the same time, he is one of the oldest participants and no longer has any contact with people in the U.S. For the other participants, time is a predicting factor. The age at arrival and length of residence did influence the language loss of the participants.

4.3 Discussion

Overall, the frequency of code-switching into German in the English interviews and the lexical attrition concerning the American bilinguals is lower than that of other bilinguals (Schmid 2002). This finding shows that identity-related factors do play a role in the bilingual speech of Americans in Germany. This is representative of different degrees of lexical access problems that are related to outer, extralinguistic factors that ultimately play into Americans' bilingual speech and are also symbolic of their bicultural identities.

Code-switching, which is often used for pragmatic interactional goals, indicating a certain ethnic or national affiliation, is less influenced by most extralinguistic factors (such as length of residence or arrival age) except contact with other Americans in Germany. Those who do have contact with other Americans code-switch into German for pragmatic purposes more than those who have no such contact. Since the interviews were fairly informal but held in English, a plausible explanation would be that it is more common among Americans to code-switch in their interactions than to speak English only. Participant observation for over four years confirms that English-only conversations are rather rare since at one point or another German expressions are inserted into the Americans' speech. Thus, code-switching appears to vary among the different extralinguistic factors.

5. Summary

The above analyses included discourse analytic and statistical analyses and aimed to show that narrative interview data can be conclusive in different ways. Despite the fact that research methods are different, a combination of discourse analysis and statistical analysis provides different angles on the data at hand. In the excerpts above, a detailed functional analysis provides insight into the social functional use of code-switching. Stretches of bilingual language data were socio-pragmatically employed to contrast different cultural positions and emphasize these contrasts. They are used as narrative strategies in which the language switch signals the values allotted to the different languages. However, the detailed discourse analysis alone does not provide an indication as to the overall use of bilingual utterances and how often these utterances occur under the influence of extralinguistic factors.

The statistical analysis shows how demographic, identity-related factors are related to the linguistic data from the immigrants. Education, length of residence, and L1 social networks are all factors that influence L1 attrition and the intercultural identities of speakers. Even though language attrition is not commonly viewed as an identity-related phenomenon, but rather as a psycholinguistic issue, the findings suggest that it is indicative of not only L2 interference, but also a stronger L2 identification of the participants, indexical of an identity that has undergone modification and is different from a purely L1 cultural identity. This was illustrated through the combination of different data analysis methods to gain a detailed yet comprehensive understanding of a particular bilingual immigrant speech community.

Notes

1. The participants' names have been changed.
2. *Man tut das nicht* literally means "one doesn't do that" but is best translated as "it's just not done".

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