

# **The multilingual reader: advantages in understanding/decoding German sentence structure when reading German as an L3**

This study investigates Italian and French students' grammatical problems while reading in German as an L3 or L4. To achieve this aim, we developed a reading test which consists of encyclopaedia articles on imaginary animals. By way of these articles various grammatical structures were tested for their receptive difficulty.

In this paper, the relationship between students' reading competence in their other foreign languages (mostly English, French/Italian or Spanish) and their results on our German reading test will be discussed. Our results show that especially the less advanced readers of German profit from their English reading competence. With increasing competence in German, the influence of English decreases. Furthermore, correlations between the German reading test and students' overall foreign language reading competence hint at possible advantages of being multilingual. Thus, we will try to explore in how far receptive competences in other foreign languages serve to compensate for weaknesses in the knowledge of the target language, hoping to complement existing research into reading in an L3.

Keywords: reading comprehension; foreign language acquisition; multilingual factor

## ***1. Introduction***

This paper presents results from a research project on grammatical difficulties of reading German as a foreign language. The project is based on the idea that the most natural and direct way to multilingualism starts with receptive competence in a third or fourth language. In the context of research into European intercomprehension, it investigates Italian and French students' grammatical problems while reading in German as an L3. Even though the project's main focus is on the relevance and difficulty of understanding certain grammatical structures, one of the research questions asked was whether students' specific multilingual competence plays a role in their reading performance. This issue will be dealt with in the present paper.

## ***2. The multilingual reader***

The currently widely held assumption in the field of multilingualism is that multilinguals' competence is best modelled holistically as a global system with dynamically interacting subsystems (Cook, 1992; Herdina & Jessner, 2002). Clearly, the multilingual mind is not divided into watertight compartments in which the separate languages are stored. Psycho- and neurolinguistic evidence points to the fact

that multilinguals have at their disposal a very dynamic system that combines quick language non-selective access, e.g. in the area of word recognition (Dijkstra, 2003) with the faculty of control, which, in combination, provides a dynamic and flexible way of accessing linguistic knowledge. Researchers sketch models of highly flexible interlinked networks which adapt to the current needs and wants of the multilingual individual but which can, of course, also lead the speaker astray (i.e. into the 'wrong' language sub-network) (Grosjean, 2001; Hammarberg, 2001; Hufeisen, 2000, 2003; Karcher, 1988, p. 132; Karpf, 1990, p. 242; Lutjeharms, 1995, p. 139f.; Paradis, 2004, p. 130ff.; Steinhauer, 2006, p. 95; Williams & Hammarberg, 1998, among others).

Accessing one's linguistic knowledge in a specific language can therefore activate further languages one knows. For a long time, transfer and interference studies have concentrated on the influence of people's native language on their foreign language performance. Various effects of transfer and interference from the L1 have been detected in a number of studies on foreign language production (e.g. Gass, 1983; Odlin, 1989; Selinker, 1983). More recent studies focus on the bi-directional nature of transfer in bi- or multilinguals (Brown & Gullberg, 2008; Pavlenko & Jarvis, 2002). With increasing interest in people who speak more than two languages in the past couple of years, the scope of research on transfer and interference has furthermore expanded to include questions about the significance of being multi- rather than 'only' bilingual, i.e. also on interaction effects between somebody's foreign languages.

So far, it is largely analyses of language production that have corroborated researchers' hypotheses of mutual influence of speakers' foreign languages (Cenoz, 2001; Groseva, 1998; Hammarberg, 2001; Hufeisen, 1991; Williams & Hammarberg 1998).

Until recently receptive skills have rarely been the centre of interest of studies on transfer. This might be due to a lack of suitable methodology and to some pedagogical tendency to concentrate on the productive mode. Yet in the past few decades, studies on mother tongue transfer in language comprehension have proved that the native language also has a considerable part to play when people read in a foreign language. For example, Fabricius-Hansen (2002), Faerch and Kasper (1987), Koda (1993), Lutjeharms (1998), and Ringbom (1987) found that sentence processing strategies are shaped by the structures of the native language and may consequently give rise to errors in reading comprehension in the foreign language.

Only lately, in the context of European intercomprehension and especially of the EuroCom project (Kischel, 2002; Klein & Stegmann, 2000), have researchers begun to acknowledge the special status of L3 comprehension ('L3' referring to any additional foreign language besides the L2) as opposed to L2 comprehension and they have started to examine transfer effects between foreign languages during reading or listening (Marx, 2005; Meissner & Burk, 2001; Reissner, 2004).

Findings on the difference between L2 and L3 reading comprehension, i.e. on the specific 'added value' of being multilingual, have been contradictory. Cenoz and Valencia (1994) evaluated the effects of bilingualism on third language reading (and other language skills) in English in the Basque country. Their results bore out their hypothesis that bilinguals obtain higher scores than their monolingual counterparts. Modirkhamene (2006) obtained similar results in her study of Turkish-Persian bilinguals and Persian monolinguals reading in English as a foreign language. In Gibson and Hufeisen's study (2003), subjects were asked to translate a text from Swedish, which none of the subjects knew, to English/German. The subjects came from different language backgrounds but all of them had studied one or several

foreign language(s) from the Germanic language family. Gibson/Hufeisen find that the quality of their subjects' translations correlates with the number of foreign languages the subject knows.

In contrast, Van Gelderen et al. (2003) did not find any differences between monolingual and bilingual Dutch learners of English in terms of the components of reading comprehension skill. And even more strikingly, their L2 readers outperformed the L3 readers of EFL. It must be added, though, that Van Gelderen et al.'s bilingual subjects have a migrant background and their weaker performance might thus be related to socioeconomic factors, to not being literate in their L1, and/or to the greater typological distance between the immigrant learners' L1 (for most of them Turkish, Berber, or Arabic) and English as compared to Dutch and English, for instance.

German has not been the language of interest in any study of this kind, as far as we can see.

What is it that makes L3 reading different from L1 or L2 reading? Being multilingual, as we have seen above, does not mean having multiple monolingual personalities; it means having at one's disposal not only additional and different knowledge about language(s) as compared to monolinguals but also additional and different experience with language(s). It is widely assumed in the literature that these differences in experience and (declarative) knowledge allow multilinguals to develop different and more diverse strategies, i.e. partly unconscious but also conscious procedures that are applied when dealing with languages in general. Following Herdina and Jessner (2002) we can subsume these particular features of multilingual systems under the term M-factor. Thus, not only do multilinguals have more potential transfer bases in the lexical and syntactic domain, but those transfer bases also offer

further advantages in the domain of inter-lingual inferencing (cf. Carton, 1971 on the importance of inferencing in foreign language learning). As has been shown in Berthele (2008), the capacity to make inter-lingual inferences increases with higher multilingual skills in general, but the most dramatic increases in the inter-lingual inferencing capacity correlate with increasing proficiency in languages that are closely related to the language whose items are being inferred. Quite undoubtedly, individual multilingualism bears the potential to positively affect the repertoire of comprehension strategies that has been shaped by the multilingual's experience of perceiving and understanding not only his/her mother tongue but one or several other foreign language(s). Given these particular benefits provided by the M-factor (Herdina & Jessner, 2002), we assume multilinguals to have enhanced possibilities in different partial domains of foreign language processing, most notably in the area of the quick and reliable discovery of cross-language regularities in the lexical, syntactic and morphosyntactic domain.

However, we also know from the studies by Müller-Lancé (1999, 2003) and Ender (2006) that the simple fact of being multilingual (in the sense of speaking more than two languages on a minimal level of proficiency) does not automatically entail the most effective and adequate use of the multilingual repertoire. Multilingual experience cannot only reinforce certain patterns of behaviour but also hamper or prevent them. Both Müller-Lancé and Ender found that a substantial group of multilinguals act like monolinguals. These subjects do not seem to make optimal use of their multilingual competence, they do not activate and exploit their full linguistic knowledge and experience in the different languages but rather concentrate on one language only. Müller-Lancé introduces the term 'monolinguoid' to refer to this group of learners. Accordingly, 'multilinguoid' refers to people who do not only formally

know several languages but who also bring their knowledge to bear on their actual linguistic behaviour. He tries to explain people's reluctance to act like 'multilinguoids' with the nature of foreign language instruction, along with personality traits which result in the over-use of monitor and under-use of inference strategies (Müller-Lancé, 2003). Hence, for a considerable proportion of people, it is not enough to have formally acquired several languages in order to behave like a multilingual. What is obviously needed is well-directed 'consciousness-raising' and training in multilingual competencies – one of the central aims of intercomprehension didactics as instantiated, e.g. in the EuroCom project (Hufeisen & Marx, 2007; Stegmann & Klein, 1999).

Some researchers have looked especially at the process and products of lexical inferencing in multilingual reading (Ender, 2007; Müller-Lancé, 1999, 2003). However, there is still a considerable gap on the grammatical level as far as empirical research is concerned. One study that explicitly focuses on the grammatical processes in multilingual reading was carried out by Reissner (2004). Her subjects were presented with a text in Catalan, a language not known to any of them. All subjects had a good knowledge of English and at least one Romance language. The students could not only understand large parts of the text but also answer questions about the grammatical rules of the Catalan language. Reissner (2004) concludes that subjects had developed hypotheses about the grammar of the language. In accordance with studies of this kind, Meissner developed his theory of a 'spontaneous' or 'hypothetical' grammar that recipients form on encountering a new, but partly intercomprehensible language. According to Meissner (Meissner, 1997; Meissner & Burk, 2001; Meissner & Senger, 2001) recipients form a hypothetical construct of the grammatical system of the new language, based on their knowledge of the mother

tongue, related foreign languages and the input from the new language. With each new input, they verify/falsify and modify their hypotheses. This hypothetical grammatical system is thus highly flexible and dynamic and adapts to each new encounter with the language.

An important contribution to the successful construction of a text and context based mental model is expected to be made by the trans-lingual, i.e. non-language-specific competence that, following Cummins (1991), can be labelled cognitive academic language proficiency (CALP). Most researchers in the field of bi- and multilingualism today assume that CALP can be transferred in more than one direction within the multilingual repertoire. As will be shown below, our test is clearly focused on a cognitively demanding task and thus fully draws on the cognitive academic proficiency – be it acquired in only one language (the L1), or in two or more languages.

Empirical results on grammatical processing during multilingual reading are rather scarce, as we have seen. We thus set out to inspect more closely the interactions between our subjects' foreign languages and the influence they have on decoding the grammar of a foreign language that some of the readers do not even know. We will examine if students make use of their multilingual competence in reading German and if so, when.

These analyses are based on the following assumptions:

Multilingual competence is conducive to reading comprehension in an additional foreign language.

And more specifically,

1a) There is a positive correlation between subjects' reading proficiency in English and our German reading test result.

1b) There is a positive correlation between subjects' overall foreign language reading proficiency (excluding German) and our German reading test result.

1c) The correlation of English reading proficiency or overall foreign language reading proficiency and our German reading test result depends on the level of general German language proficiency. More specifically, at relatively low levels of German proficiency correlations are expected to be higher than at higher levels of proficiency in German.

1d) Overall foreign language reading proficiency and English reading proficiency facilitates the reading of certain grammatical structures of German more than of others.

These hypotheses will be examined and discussed in sections 4 and 5 of this paper.

### ***3. Method and subjects***

On the basis of the results of a pilot-study, a catalogue of possible grammatical difficulties of reading German as a foreign language was developed. Many of these potential difficulties can also be found in the relevant literature (cf. Heringer, 1987, 2001; Bernstein, 1990; Stalb, 1993; Becker, 1973, among others). Their actual receptive difficulty has, however, never been tested empirically. This list of grammatical phenomena was drawn upon when developing the research instrument of our study.

#### ***3.1 Design of the research***

The main research instrument was a reading test consisting of a text on an imaginary animal (either "Humpfhorn" or "Flundodil") and a comprehension test. The texts were written in the form of encyclopaedia articles. Such articles offer a number of advantages: Firstly, they are close enough to academic writing, an adequate type of



text for our target group, which consisted of students. Secondly, the format of an encyclopaedia article allowed the control of the knowledge of text-schemata as students presumably possess a text-schema for encyclopaedia articles. Thirdly, the choice of an imaginary animal instead of an existing one facilitates the control of prior knowledge. Fourthly, the choice of a coherent text instead of individual sentences enables the subjects to draw on the co-text to make sense of the incoming information. In sum, this reading task was designed to have a high ecological validity. It is similar to a natural reading situation that involves detailed or careful reading. Contrary to reading a novel for instance, reading an encyclopaedia article is usually done for learning and therefore the type of reading employed is typically that of careful reading.

Further research instruments were a German placement test as well as a self-assessment questionnaire of the students' competence in reading foreign languages. This self-assessment was based on the self-assessment grid of the European Language Portfolio (ELP).

### *3.2 Design of the reading text and test*

The reading texts, i.e. the articles on imaginary animals, consisted of several passages on various aspects of the animals: phenotype, habitat, food, enemies, and reproduction. These sections were rather self-contained and were thus thought to enable students that were lost at one point of the text to take up the thread again at a later stage, helping to keep the number of subsequent comprehension errors to a minimum.

As our project solely aimed at finding out where the *grammatical* problems for readers of German with French or Italian mother tongue lie, translations of all the content words of the text were given in the form of interlinear glosses. Function

words were regarded as grammatical aspects and were therefore not translated. The translation of content words allowed for at least partial control over the lexical factor.

The reading texts were written so as to contain a number of possibly difficult grammatical structures. The original catalogue of structures deriving from the pilot-study was shortened to a list of seven phenomena. It contained the so-called "Linksattribut" (extended left-branching attribute), the object-verb-subject structure, the verb-topicalisation, the subject-clause without "es", the conditional-clause without a conjunction, the passive and the so-called "Satzklammer" (sentence bracket). By "Satzklammer" we refer to a construction in which the finite verb form and the other parts of the predicate are split apart, hence the term "bracket" (cf. example 1).

(1) Das Humpfhorn hat nach neuesten Forschungen für einige hundert Jahre auch in Europa gelebt.

*\*The Humpfhorn has according-to latest studies for several hundred years also in Europe lived.*

In order to obtain significant results, six items of every target structure were included in the texts. Therefore, the list of target structures was kept rather short. It was limited to some of those structures that are thought to be rather frequent in academic language. Naturally, the list is not complete and could easily be extended. In order to be able to decide on the difficulty of a target structure, an alternative sentence was written for each target sentence. These alternative sentences contained an alternative structure, their propositional content and lexis, however, were the same. Thus, every target structure was matched with an alternative structure. The OVS-structure, for instance was matched with a SVO-structure (cf. examples 2 and 3).

(2) Target sentence (OVS):

Einen Teil seiner Beute frisst das Humpfhorn sofort.

*\*A part of-its prey eats the Humpfhorn immediately.*

(3) Alternative sentence (SVO):

Das Humpfhorn frisst einen Teil seiner Beute sofort.

*The Humpfhorn eats a part of-its prey immediately.*

The encyclopaedia articles were written in two different versions. Target sentences and alternative sentences were evenly spread over both versions so that one version was as difficult as the other.

The comprehension test was written in the L1 of the subjects and allowed for the separate testing of each sentence. In this way, it was possible to test the difficulty of the target structures with respect to the alternative structures. The comprehension test consisted of various tasks: a multiple-choice picture task was used to test the comprehension of the sentences containing information on the appearance of the animals. Furthermore, there were verification questions and a table in which a few relevant key words were to be filled in (short-answer questions).

### *3.3 Implementation of the test: locations and subjects*

Altogether, 506 students were tested at different universities in Italy and France. 312 subjects were Italian and 194 French native speakers. In Italy, tests took place at universities in Bergamo, Bologna, Como and Pisa. In France, students at universities in Dijon, Grenoble, Lyon, Montpellier and Paris were tested. The subjects were either students of linguistics, of German language and literature studies or enrolled in a regular German language course. The subjects' distribution in terms of their level of German was the following: A1: 9%, A2: 13%, B1: 21%, B2: 33%; C1: 25%, C2: 0%.

## **4. Results**

The following discussion will concentrate on analysing the results of the study from a multilingual perspective, i.e. on trying to answer the question whether multilingualism is of advantage when reading German and dealing with potential difficulties of its receptive grammar.

#### *4.1 The influence of English reading skills*

When investigating the effects of foreign language competence on reading German as L3, an important question that arises is the extent of the influence of subjects' English reading competence. Research into interlingual transfer has shown that several factors condition the influence of an L2 on an L3. Among the ones most often cited are firstly the perceived and actual typological similarity between the L2 and the L3 and secondly the proficiency in the L2 (Hammarberg 2001, 22f.; Meissner/Burk, 2001, 85ff.). Further factors cited are the recency of acquisition of the language in question and its L2 status, as it appears that an L2 is sometimes more easily and readily accessed for interlingual transfer than the L1 (Hammarberg 2001, 22f.). All of these factors, then, should enhance L2 transfer in our subjects: given their competence in English the subjects are proficient in another west-Germanic language which they may use as a transfer base, thus a certain typological similarity is undoubtedly given. Furthermore, English had L2 status for the great majority of our subjects. Only three out of 506 indicated not to have any knowledge of English. Given the relatively young age of the participants, English also is a relatively recent L2. As to the proficiency in L2, the data collected by means of the self-assessment questionnaire showed clearly that for most of the subjects English was the best-known foreign language: two thirds (67.1%) of them indicated a level of English reading competence of B2 or more, another quarter (24.3%) indicated a level of B1 and only 9.1% indicated a level of less than B1.

A partial correlation analysis between subjects' self-assessed English reading skills and the result achieved in the reading test, controlling for the effect of their overall German language competence, was used to investigate a possible relationship between the factors English reading skills and success in the German reading test. The correlation found is rather small ( $r=.149$ ), however, nevertheless significant ( $p<.01$ ).

Several possible explanations can be found for this rather small correlation: firstly, we presume that the correlation between the English reading competence and the results of our German reading test might have been higher if the translation of the content words had not been given. Subjects with a sound knowledge of English are likely to have an advantage in figuring out the meaning of unknown German words. Secondly, although English and German are related languages there are some important differences in the sentence structure of English and German (for instance verb-placement, position of subject, etc.).

A separate analysis of the correlation of English reading competence and the reading test results for the different levels of proficiency in German (again controlling the effect of the overall German language competence) proved to be particularly instructive: while it showed a significant and substantial correlation for the level A2 ( $r=.421$ ;  $p=.001$ ), no significant correlation could be found for the other levels of German competence.

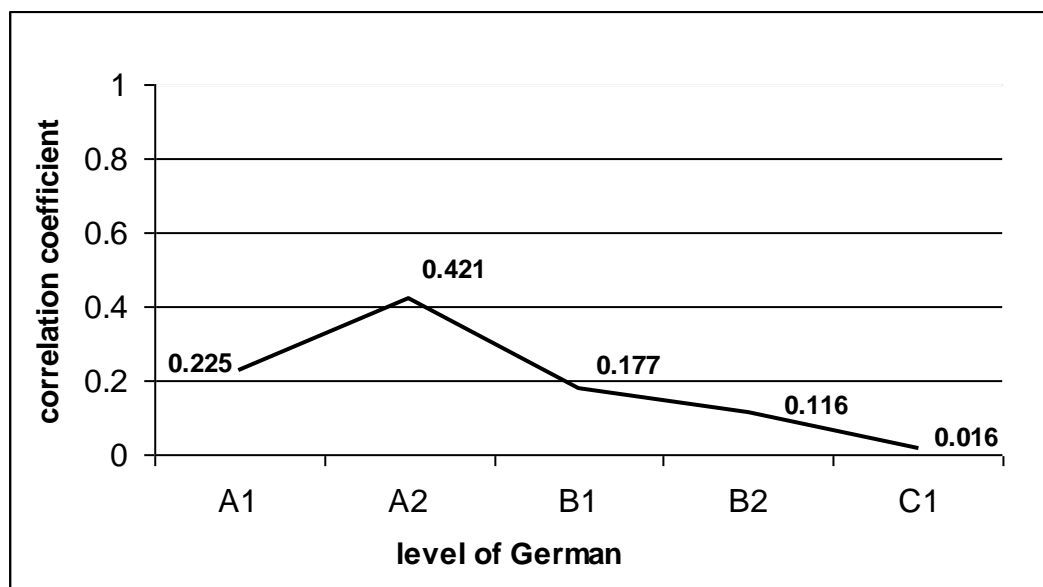


Figure 1: Correlation of self-assessed English reading competence and reading test result according to level of German

Thus, only students with a German level of A2 could significantly benefit from their English reading competence. It seems that at this level students' knowledge

of German alone is not sufficient for understanding the German texts of our study. Therefore, subjects at this level (unconsciously) look for other resources available. The question remains, however, why students with a German level of A1 could not likewise benefit from their English reading skills. One reason might be that not even good English reading skills may compensate for their very limited knowledge of German. Contrary to students at level A1, those at levels B1 and B2 already possess a sound knowledge of German sentence structure and therefore only rarely need to resort to their knowledge of English. Or, if they do so, this does not make any measurable difference in the outcome. Thus, English as a transfer base for understanding German sentence structure is especially useful at the lower levels of competence in German, when the knowledge of German is still a weak tool for analysing the structures.

Apart from analysing the correlation between English and the reading test result as a whole, we also analysed the influence of English on the comprehension of the different grammatical structures (all six sentences of each structure taken together) as well as on each individual sentence tested. For this purpose we divided our subjects into two groups: a low English reading proficiency group (self-assessed English reading competence at A1-B1) and a high English reading proficiency group (self-assessed English reading competence at B2-C2). Only in the case of the passive-construction did chi-square tests show a significant difference between the error rate of the low (20.2%) and the high English reading proficiency group (14.4%) (chi-square (Pearson):  $\chi^2(1)=4.088$ ;  $p<.05$ ). On the level of each individual sentence, chi-square tests showed in 7 out of 84 sentences tested a significant difference in comprehension between the two groups. The seven sentences contain various structures such as a conditional clause, a passive, a relative clause, verb-

topicalisations and surprisingly also a left-branching attribute. Despite this structural variability, the seven sentences have two things in common: firstly, they led to a rather high percentage of comprehension errors. Secondly, contrary to other difficult sentences tested, the seven sentences do not contain difficult or rare function words. Thus it seems that high English reading skills may help to understand a structurally difficult German sentence as long as it does not contain difficult or rare function words. If, however, a sentence contains unknown function words, subjects do not seem to benefit from their English reading skills.

#### *4.2 The influence of subjects' overall foreign language reading competence*

Taking into account that many of our subjects knew another foreign language apart from English and German (in most cases a Romance language), we decided to analyse the influence of their overall foreign language reading competence on the result of our reading test. For this purpose we introduced the variable “overall foreign language reading competence” which includes subjects' English reading competence as well as the reading competence in an additional language apart from German. Subjects were divided into two groups: a high and a low overall foreign language reading competence group.<sup>i</sup> An independent samples t-test showed a significant difference ( $p < .05$ ) in the comprehension of the German reading test between the group of students with a high overall foreign language reading competence (mean number of comprehension errors: 3.91) and the group with a low overall foreign language reading competence (mean number of comprehension errors: 4.60). As an independent sample t-test could not detect a significant difference between the overall German competence of the two groups, we may therefore conclude that good overall foreign language reading competences may indeed help to analyse German sentence structure.

Figure 2 illustrates the error rates of the two groups for each level of German competence.

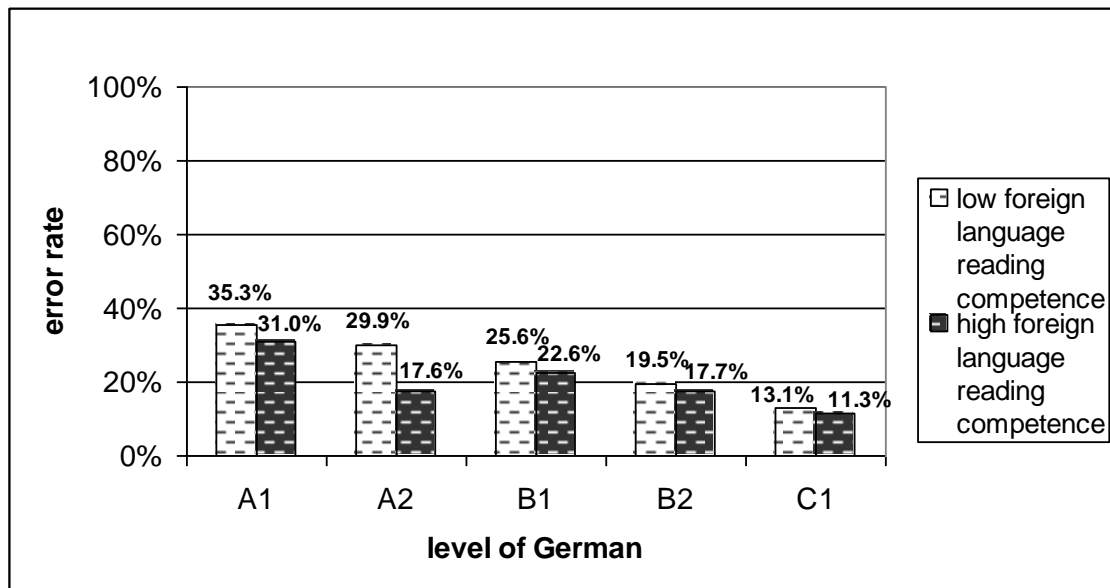


Figure 2: Overall foreign language reading competence and error rate according to level of German<sup>ii</sup>

As figure 2 unmistakably shows, the difference between the two groups of subjects is largest on level A2. At this level the German reading comprehension of students with a high overall foreign language reading competence is significantly higher (error rate: 17.6%) than the reading comprehension of students with a low overall foreign language reading competence (error rate: 29.9%) (chi-square (Pearson):  $\chi^2(1)=13.250$ ;  $p<.001$ ). On all the other levels of German, the difference in the error rate between the high and low overall foreign language reading competence groups is not significant. Thus it seems that especially those readers that only have a basic knowledge of German benefit from their reading competence in other foreign languages. For these readers competences in other foreign languages can be an extremely useful tool for analysing German sentence structure. This is illustrated by the fact that subjects with a German level of A2 and a high overall foreign language reading competence also performed significantly better (error rate: 17.6%) than



subjects with a German level of B1 and low foreign language reading competences (error rate: 25.6%) (chi-square (Pearson):  $\chi^2(1)=6.428$ ;  $p<.05$ ).

Again we were interested in the question whether particular grammatical structures are more easily decoded by participants with high multilingual competence. Interestingly, it is the 'Linksattribut' (extended left-branching attribute, cf. example 4 below) where subjects seem to profit most from their multilingual competence – a structure which is supposedly rather specific to German and which demands increased flexibility in dealing with the word order of a sentence.

(4) Das auffälligste Merkmal des Humpfhorns ist sein am Ende des Rückens befindliches spitzes Horn.

*\*The most salient feature of-the Humpfhorn is its at-the end-of-the back located pointy horn.*

Subjects with a high overall foreign language reading competence have significantly fewer problems when reading sentences containing left-branching attributes (error rate: 14.7%) than subjects with low overall foreign language reading competence (error rate: 23.1%) (chi-square (Pearson):  $\chi^2(1)=7.202$ ;  $p<.01$ ).

Apparently, the familiarity with a number of different foreign languages enhances the flexibility (or motivation) to analyse foreign grammatical structures.

As far as the influence on the comprehension of individual sentences is concerned, we could only find two cases where subjects with a high foreign language reading competence had a significant advantage over those with a low foreign language reading competence: one sentence contains a left-branching attribute and the other a conditional clause without conjunction. Interestingly, both sentences have not only led to very high error rates but also have a further aspect in common: in both cases a high German proficiency did not significantly help to understand the sentence. Thus it might be that participants with a high overall foreign language reading competence do possess skills, such as metalinguistic awareness or linguistic

flexibility, that other participants do not possess to the same extent: skills that can be subsumed by the term “M-factor”.

### ***5. Discussion***

The objective of this paper has been to investigate whether the knowledge of additional foreign languages, especially English, may help Italian or French mother tongue speakers when decoding the grammar of German reading texts. Based on research that found additive effects of bilingualism on reading English as L3 (Cenoz and Valencia, 1994; Modirkhamene, 2006) we expected to find a positive effect of multilingualism on reading German as L3. More specifically, according to hypothesis 1a, we anticipated a positive influence of subjects' self-assessed English reading competence on their performance in the German reading test. To verify our hypothesis, we investigated the influence of English on the reading test result by the aid of a partial correlation analysis controlling for the influence of subjects' German language competence. The analysis indeed showed a rather small but very significant correlation. It is widely acknowledged that knowledge of English may help learners of German to understand certain German words. Since our reading test at least partially controlled for the lexical factor by translating the content words, our results suggest that knowledge of English may even be helpful for understanding German grammatical structures.

A more detailed analysis of the relationship between English reading competence and the German reading test results showed that especially subjects with a German language competence of A2 could benefit from their English reading skills. While at this level the correlation between the two variables was substantial and highly significant, this was not the case at all the other levels of German competence. It seems, therefore, that knowledge of English is most valuable when one is not yet

very familiar with the basic grammatical aspects of German. Then, the help of an additional tool for analysing German sentence structure proves to be most useful.

Taking into account that the majority of our subjects indicated reading competences in an additional foreign language apart from English and German, we furthermore introduced a variable that comprises the English reading competence as well as the reading competence in an additional foreign language (except German). Subjects were divided into two groups: a high and a low “overall foreign language reading competence” group. While there was no significant difference in the German competence of the two groups, the high overall foreign language reading competence group proved to have a significant advantage in comprehending the German reading test. Thus, we are able to confirm hypothesis 1b, stating that there is a positive correlation between subjects’ overall foreign language reading competence (excluding German) and their reading performance in German. We furthermore analysed the influence of the overall foreign language reading skill variable separately for each level of proficiency in German. Similar to the results regarding subjects’ English reading competence, statistical analysis showed that especially readers with a German knowledge of A2 could benefit most from their overall foreign language reading competence. At this level, the high foreign language reading competence group has a significantly lower error rate than the low foreign language reading competence group. Interestingly, it is even significantly lower than the error rate of subjects with a German competence of B1 that have a low foreign language reading competence. Thus, also hypothesis 1c was confirmed, which expected the influence of foreign language reading skills as well as of English reading skills to depend on the readers’ level of German.

In a further step, we also analysed the influence of our subjects' English reading competence as well as their overall foreign language reading competence on the comprehension of specific grammatical structures. In the case of English reading skills, a significant correlation could only be found for the comprehension of the German passive-construction. A high overall foreign language reading competence, however, proved to be particularly useful for understanding left-branching attributes. As this is a structure which is supposedly rather specific to German, it is not possible to explain this finding via transfer. Rather, it may be due to the fact that multilinguals are more used to analysing various grammatical input which may lead to greater flexibility and an enhanced metalinguistic awareness when reading German as L3, in the very sense of the M-factor quoted at the beginning of this article. In sum, also our hypothesis 1d was – though only weakly – confirmed, since it predicted that multilingual as well as English reading competence would facilitate the comprehension of certain grammatical structures more than of others.

## **6. References**

- Becker, N. (1973). Zur Gewinnung eines „grammatischen Minimums“ für das Leseverständnis von fachsprachlichen Texten. *Zielsprache Deutsch*, 2, 47-53.
- Bernstein, W.Z. (1990). *Leseverständnis als Unterrichtsziel. Sprachliches und methodisches Grundwissen für den Lehrer im Fach Deutsch als Fremdsprache*. Heidelberg: Groos.
- Berthele, R. (2008). Dialekt-Standard Situationen als embryonale Mehrsprachigkeit. Erkenntnisse zum interlingualen Potenzial des Provinzlerdaseins. In K.J. Mattheier & A. Lenz (Eds.), *Dialect Sociology* (87-107). Sociolinguistica 22. Tübingen: Niemeyer.
- Brown, A., & Gullberg, M. (2008). Bi-directional crosslinguistic influence in L1-L2 encoding of manner in speech and gesture. A Study of Japanese Speakers of English. *Studies in Second Language Acquisition*, 30(2), 225-251.
- Carton, A.S. (1971). Inferencing: a process in using and learning language. In P. Pimsleur & T. Quinn (Eds.), *The psychology of second language learning. Papers from the second international congress of applied linguistics, Cambridge, 8-12 September 1969* (45-58). Cambridge: Cambridge University Press.
- Cenoz, J., & Valencia, F.J. (1994). Additive trilingualism: Evidence from the Basque Country. *Applied Psycholinguistics*, 15, 195-207.

- Cenoz, J. (2001). The Effect of Linguistic Distance, L2 Status and Age on Cross-linguistic Influence in Third Language Acquisition. In J. Cenoz, B. Hufeisen & U. Jessner (Eds.), *Cross-linguistic influence in third language acquisition* (8-20). Clevedon: Multilingual Matters.
- Cook, V. (1992). Evidence for multicompetence. *Language Learning*, 42, 557-591.
- Cummins, J. (1991). Conversational and Academic Language Proficiency in Bilingual Contexts. In J. Hulstijn & J.F. Matter (Eds.), *Reading in Two Languages* (75-89), AILA Review 8.
- Dijkstra, T. (2003). Lexical processing in bilinguals and multilinguals. In J. Cenoz, U. Jessner & B. Hufeisen (Eds.), *The Multilingual Lexicon* (11-26). Dordrecht: Kluwer Academic Publishers.
- Ender, A. (2007). *Wortschatzerwerb und Strategieneinsatz bei mehrsprachigen Lernenden. Aktivierung von Wissen und erfolgreiche Verknüpfung beim Lesen auf Verständnis in einer Fremdsprache* (Mehrsprachigkeit und multiples Sprachenlernen 4). Baltmannsweiler: Schneider Verlag Hohengehren.
- European Language Portfolio. Retrieved June 26, 2007 from <http://www.sprachenportfolio.ch/pdfs/english.pdf>
- Fabricius-Hansen, C. (2002). Texte in der Fremdsprache lesen und verstehen: Überlegungen zu einem vernachlässigten Thema. *SPRIKreports*, 16, 1-17.
- Faerch, C., & Kasper, G. (1987). Perspectives on language transfer. *Applied Linguistics*, 8, 111-136.
- Gass, S. (1983). Language Transfer and Universal Grammatical Relations. In S. Gass & L. Selinker (Eds.), *Language Transfer in Language Learning* (69-82). Rowley: Newbury House.
- Gibson, M., & Hufeisen, B. (2003). Investigating the role of prior foreign language knowledge. In J. Cenoz, U. Jessner & B. Hufeisen (Eds.), *The Multilingual Lexicon* (87-102). Dordrecht: Kluwer Academic Publishers.
- Groseva, M. (1998). Dient das L2-System als ein Fremdsprachenlernmodell? In B. Hufeisen & B. Lindemann (Eds.), *Tertiärsprachen. Theorien, Modelle, Methoden* (21-30). Tübingen: Stauffenburg.
- Grosjean, F. (2001). The bilingual's language modes. In J. Nicol (Ed.), *One mind, two languages: bilingual language processing* (1-22). Oxford: Blackwell.
- Hammarberg, B. (2001). Roles of L1 and L2 in L3 production and acquisition. In J. Cenoz, B. Hufeisen & U. Jessner (Eds.), *Cross-linguistic influence in third language acquisition* (21-41). Clevedon: Multilingual Matters.
- Herdina, P., & Jessner, U. (2002). *A Dynamic Model of Multilingualism. Perspectives of Change in Psycholinguistics*. Clevedon: Multilingual Matters.
- Heringer, H.J. (1987). *Wege zum verstehenden Lesen. Lesegrammatik für Deutsch als Fremdsprache*. München: Hueber.
- Heringer, H.J. (2001). *Lesen lehren lernen: Eine rezeptive Grammatik des Deutschen*. 2. durchgesehene Auflage. Tübingen: Max Niemeyer.
- Hufeisen, B. (1991). *Englisch als erste und Deutsch als zweite Fremdsprache. Empirische Untersuchung zur zwischensprachlichen Interaktion*. Frankfurt a. M.: Peter Lang.
- Hufeisen, B. (2000). A European perspective - Tertiary languages with a focus on German as L3. In J.W. Rosenthal (Ed.), *Handbook of Undergraduate Second Language Education: English as a Second Language, Bilingual, and Foreign Language Instruction for a Multilingual World* (209-229). Mahwah, N.J.: Erlbaum.

- Hufeisen, B. (2003). L1, L2, L3, L4, Lx - alle gleich? Linguistische, lernerinterne und lernerexterne Faktoren in Modellen zum multiplen Spracherwerb. *Zeitschrift für Interkulturellen Fremdsprachenunterricht*, 8(2/3), 97-109.
- Hufeisen, B., & Marx, N. (Eds.) (2007). *EuroComGerm - Die sieben Siebe. Germanische Sprachen lesen lernen*. Aachen: Shaker Verlag.
- Karcher, G. (1988). *Das Lesen in der Erst- und Fremdsprache*. Heidelberg: Groos.
- Karpf, A. (1990). *Selbstorganisationsprozesse in der sprachlichen Ontogenese: Erst- und Fremdsprache(n)*. Tübingen: Narr.
- Kischel, G. (Ed.) (2002). *EuroCom: mehrsprachiges Europa durch Interkomprehension in Sprachfamilien: Tagungsband des Internationalen Fachkongress im Europäischen Jahr der Sprachen 2001, Hagen, 9.-10. November 2001*. Aachen: Shaker Verlag.
- Klein, H.G., & Stegmann, T.D. (2000): *EuroComRom - Die sieben Siebe: Romanische Sprachen sofort lesen können* (2nd ed.). Aachen: Shaker Verlag.
- Koda, K. (1993). Transferred L1 Strategies and L2 Syntactic Structure in L2 Sentence Comprehension. *Modern Language Journal*, 77, 490-500.
- Lutjeharms, M. (1995). Der fremdsprachige Leseprozess. In B. Spillner (Ed.), *Sprache: Verstehen und Verständlichkeit* (137-147). Frankfurt a. M.: Peter Lang.
- Lutjeharms, M. (1998). Die syntaktische Verarbeitung bei der Rezeption von Sprache. In E. Klein & S.J. Schierholz (Eds.): *Betrachtungen zum Wort* (117-152). Tübingen: Stauffenburg Verlag.
- Marx, N. (2005). *Hörverstehensleistungen im Deutschen als Tertiärsprache: zum Nutzen eines Sensibilisierungsunterrichts in "DaFnE"*. Baltmannsweiler: Schneider Verlag Hohengehren.
- Meissner, F.-J. (1997). Philologiestudenten lesen in fremden romanischen Sprachen. Konsequenzen für die Mehrsprachigkeitsdidaktik aus einem empirischen Vergleich. In F.-J. Meissner (Ed.): *Interaktiver Fremdsprachenunterricht. Wege zu authentischer Kommunikation. Ludger Schiffler zum 60. Geburtstag* (25-44). Tübingen: Narr.
- Meissner, F.-J., & Burk, H. (2001). Hörverstehen in einer unbekannt romanischen Fremdsprache und methodische Implikationen für den Tertiärspracherwerb. *Zeitschrift für Fremdsprachenforschung*, 12(1), 63-102.
- Meissner, F.-J., & Senger, U. (2001). Vom induktiven zum konstruktiven Lehr- und Lernparadigma. Methodische Folgerungen aus der mehrsprachigkeitsdidaktischen Forschung. In F.-J. Meissner & M. Reinfried (Eds.), *Bausteine für einen neukommunikativen Französischunterricht* (21-50). Tübingen: Narr.
- Modirkhamene, S. (2006). The Reading Achievement of Third Language versus Second Language Learners of English in Relation to the Interdependence Hypothesis. *The International Journal of Multilingualism*, 3(4), 280-295.
- Müller-Lancé, J. (1999). Zur Nutzung vorhandener Fremdsprachenkompetenzen als Transferbasis für romanische Mehrsprachigkeit – ein empirischer Versuch und seine psycholinguistische Relevanz. *Grenzgänge*, 6(12), 81-95.
- Müller-Lancé, J. (2003). *Der Wortschatz romanischer Sprachen im Tertiärspracherwerb. Lernerstrategien am Beispiel des Spanischen, Italienischen und Katalanischen*. Tübingen: Stauffenburg.
- Nayak, N., Hansen, N., Krueger, N., & McLaughlin, B. (1990). Language-learning strategies in monolingual and multilingual adults. *Language Learning*, 40(2), 221-244.

- Odlin, T. (1989). *Language Transfer: cross-linguistic influence in language learning*. Cambridge: Cambridge University Press.
- Paradis, M. (2004). *A Neurolinguistic Theory of Bilingualism*. Amsterdam: John Benjamins.
- Pavlenko, A., & Jarvis, S. (2002). Bidirectional Transfer. *Applied Linguistics*, 23, 190-214.
- Ramsey, R.M.G. (1980). Language-learning approach styles of adult multilinguals and successful language learners. *Annals of the New York Academy of Sciences*, 345, 73-96.
- Reissner, C. (2004). Fachsprachen und Interkomprehension. In H.G. Klein & D. Rutke (Eds.), *Neuere Forschungen zur Europäischen Interkomprehension* (135-154). Aachen: Shaker.
- Ringbom, H. (1987). *The role of the first language in foreign language learning*. Clevedon-Philadelphia: Multilingual Matters.
- Selinker, L. (1983). Language Transfer. In S. Gass & L. Selinker (Eds.), *Language Transfer in Language Learning* (33-53). Rowley: Newbury House.
- Stalb, H. (1993). *Deutsch für Studenten: Lesegrammatik*. Ismaning/München: Verlag für Deutsch.
- Stegmann, T.D., & Klein, H.G. (1999). *EuroComRom - Die sieben Siebe. Romanische Sprachen sofort lesen können*. Aachen: Shaker Verlag.
- Steinhauer, B. (2006). *Transfer im Fremdspracherwerb: ein Forschungsüberblick und eine empirische Untersuchung des individuellen Transferverhaltens*. Frankfurt a. M.: Lang.
- Van Gelderen, A., Schoonen, R., de Glopper, K., Hulstijn, J., Snellings, P., Simis, A. et al. (2003). Roles of linguistic knowledge, metacognitive knowledge and processing speed in L3, L2 and L1 reading comprehension. *International Journal of Bilingualism*, 7(1), 7-25.
- Williams, S., & Hammarberg, B. (1998). Language Switches in L3 Production: Implications for a Polyglot Speaking Model. *Applied Linguistics*, 19(3), 295-333.

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<sup>i</sup> Subjects with a high reading competence (C1 or more) in English or an additional language apart from German as well as a reading competence in an additional language of at least A2 formed the “high overall foreign language reading competence group”. The “low overall foreign language reading competence group” consisted of all other subjects.

<sup>ii</sup> A1: low foreign language reading competence (l) n(sentences)=714; high foreign language reading competence (h) n=252; A2: l: n=1134; h: n=210; B1: l: n=1785; h: n=399; B2: l: n=2583; h: n=882; C1: l: n=2142; h: n=504.