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Too Matsch for You?

Monolingual Humorous Slogans Are Recalled Better than Mixed-Language Ones

Abstract: The paper reports the results of a programmatic study investigating the potential of different types of advertising slogans to be retained and recalled. Four types were tested: (1) monolingual non-humorous slogans, (2) mixed-language non-humorous slogans, (3) monolingual humorous slogans and (4) mixed-language humorous slogans. 78 students of English studies were tested in a pen-and-paper task targeting the recall of pairs of brand names and invented slogans. Based on predictions derived from Craik and Tulving's (1997) levels-of-processing model, from frame-shifting theory (e.g. Coulson 2011) and from the general theory of verbal humour (Attardo and Raskin 1991; Attardo 2001), we expected that recall rates would be highest for mixed-language humorous slogans (condition 4), followed by conditions 3, 2 and 1. While our expectations were confirmed for the effects of humour on recall rates, the interaction between language-mixing and humour yielded the unexpected finding that monolingual humorous slogans were recalled better than mixed-language humorous slogans. We interpret this finding in terms of Sweller's (1988) cognitive overload theory and Sperber and Wilson's (1994) relevance theory and point out a number of avenues for further research to redress the shortcomings of this pilot study.

Keywords: bilingual wordplay, advertising, frames, humour, relevance theory, slogan

1 Introduction

Imagine your company has hired a PR agency to come up with an advertising campaign for washing powder in Germany. Imagine further that they suggest three slogans for you to choose from: "Take us – and the future is bright"; "Ultrastarke Waschkraft – it can be so easy" ['Ultrastrong washing power – it can be so easy']; and "Nimm uns – that's a weiß decision" ['Take us – that's a weiß decision'; *weiß* 'white' is phonologically similar to English *wise* and makes it a German-English pun]. Which one would you take? Each of these slogans offers some risks and benefits: the first one is purely English, which might sound more

international, modern and innovative than a purely German one. Furthermore, it involves a humorous pun (cf. section 2 for more details), as *bright* does not only refer to the future, but also to the colour of the clothes after having been washed with the product, which could render the slogan eye-catching and memorable. The risk involved is that many consumers in a German context might not (fully) understand it and / or reject it because of its foreignness. The second slogan reduces this risk, as it mixes a German with a grammatically and lexically simple English clause and might therefore be easier to understand, but, despite the use of language mixing, the simple English clause without wordplay does not seem to be salient enough to catch attention and arouse interest. The third slogan seems to combine the advantages of the first two slogans: it mixes English and German and offers a cross-linguistic pun, thus promising to attract the consumers' attention. But again, it might be too difficult for a mass audience that is not sufficiently competent in English.

While it is tempting to base your choice of the future slogan on long-term experience and gut feeling, you might also consider looking into the results of studies investigating monolingual humorous slogans (*Take us – and the future is bright*) as well as mixed-language humorous (*Nimm uns – that's a weiß decision*) and non-humorous ones (*Ultrastarke Waschkraft – it can be so easy*). You should, in particular, have a look at their potential to be retained in memory and recalled, as this is the first prerequisite for the success of a slogan. Surprisingly, however, very few studies are available, especially as far as German-English language mixing is concerned. Extensive research has been done on the use of anglicisms in slogans, i.e. of English words that are already more or less well integrated into German (e.g. Gawlitta 2000; Kupper 2003; Onysko 2007: 272–315; Klüver 2009; Rech 2015). Humour in slogans has also been researched intensively (e.g. Krishnan and Chakravarti 2003; Beard 2008; Tanaka 1994; Weinberger and Gulas 1992; Weinberger, Spotts, Campbell and Parsons 1995). In contrast, to the best of our knowledge, studies on the effects of truly mixed-language German-English slogans do not exist. A study pursuing comparable aims but targeting different languages was conducted by Luna and Peracchio who, following up on earlier studies on bilinguals and advertisements (cf. Luna and Peracchio 2001, 2002a, 2002b), examined the persuasiveness of mixed-language Spanish-English advertisements in the US. Their results suggest that mixed-language slogans should generally switch from the minority language to the majority language,¹ since the language switched to is made salient and the as-

¹ Luna and Peracchio define the terms 'majority language' and 'minority language' as follows: "Thus, we use the term majority language to denote the language spoken by the group that

sociations evoked by it decide on how the slogan will be perceived (Luna and Peracchio 2005a: 53). These results are not applicable to the situation in Germany, however, as Spanish is a minority language in the US and many Americans (and even Spanish-speaking immigrants themselves; see Luna and Peracchio 2005a: 45) seem to associate negative values with it, whereas the majority language American English receives positive associations. In Germany, both English and German are perceived positively by many – but of course by no means all – groups of speakers: German is the everyday language and first language of the majority of the inhabitants of Germany; English symbolizes progress, modernity and innovation (Piller 2003: 175; Onysko 2007: 272–315; Klüver 2009: 40; Rech 2015: 127–131).

The present paper reports a pilot study paving the way for a large-scale project aiming to fill this research gap. We report the results of an experiment investigating monolingual English vs. mixed-language German-English and humorous vs. non-humorous advertising slogans concerning their retention and recall potential. Since the main purpose of advertising slogans is to establish sustained associations with the product in consumers' minds, retention and recall are considered reasonable proxies for the potential success of slogans and will be used as target measures here. The results of the recall study will be interpreted with reference to two theoretical frameworks, frame-shifting and the general theory of verbal humour, which will be introduced in the next section.

2 Theoretical Background: Frame-Shifting, Frame-Violation and the General Theory of Verbal Humour

While processing and understanding mixed-language slogans containing a humorous pun, consumers have to achieve a number of feats that go beyond 'normal' language comprehension: they must realize that two languages are involved and identify them, they have to recognize that there is a humorous pun (see below for more details), and they must process and understand the double-entendre triggered by the latter. Two theories that generate helpful predictions as to how these tasks are solved are frame-shifting theory (Fillmore 1982; Coul-

holds the political, cultural and economic power within a country. Minority language is fixed for the language spoken by the group that possesses less power and prestige" (2005: 44).

son 2001; Fauconnier and Sweetser 1996; Ungerer and Schmid 2006; Matlock 2009; see also Onysko, DF, this volume) and the general theory of verbal humour (Attardo and Raskin 1991; Attardo 1994; Attardo 2001; Raskin 1985). We will briefly sketch the main assumptions of these theories and their implications for the present study. In the course of this, we will argue that mixed-language slogans do not trigger a frame-shift in the full sense of frame-shifting theory but what we will call a *frame-violation*.

Frame-shifting theory is based on the notion of frames, which are defined by Fauconnier and Sweetser (1996: 5) as “structured understandings of the way aspects of the world function.” Frames represent knowledge of any type of recurrent experience, including that of text types and textual macrostructures (van Dijk 1977). In our case, this means that consumers are assumed to have stored something like an ‘advertising slogan’-frame consisting of specific knowledge about advertising recruited from experience (Coulson 2001: 18; cf. Fillmore 1982: 135). The effect of the availability of such a frame is that consumers harbour specific expectations about the nature of advertising slogans. These include knowledge about the situations, contexts and media in which they are encountered (TV, radio, magazines, billboards, online ads, etc.), their functions as well as their typical components and features. Slogans are generally expected to be short, concise and ‘catchy’; they promote a specific product. Finally, and this is particularly relevant for the present study, they are formulated in one language, most frequently in the dominant language of the specific country, e.g. German in Germany. While Androutsopoulos et al. (2004) report a considerable increase of English-language slogans in German ads to around 30% from the year 2000 to 2003 (see also Androutsopoulos 2011), they emphasize that language mixing is still very rare: “Der geringe Anteil deutscher Slogans mit lexikalischen Anglizismen bestätigt die These, dass es bei den Slogans um Sprachwahl und nicht um Sprachmischung geht” (Androutsopoulos et al. 2004: 23; ‘The low proportion of German slogans containing lexical anglicisms confirms the claim that language choice rather than language mixing are the dominant issue in the slogans’, our translation). We do not expect that this situation has changed dramatically, partly because Androutsopoulos (2011) still reports the number given in his earlier publication.

In principle, frame-shifting involves the violation of frame-based expectations and the shift to a new frame that promises to be able to accommodate the newly incoming information. If it is indeed the case that mixed language slogans – especially those that do not just contain an anglicism (cf. Rech 2015) but actually switch from German to English at some point – can still be considered quite rare, the change of language is very likely to come as a surprise and cause

such a frame-violation. Consider the mixed-language example given in the introduction: “*Ultrastarke Waschkraft – it can be so easy* [‘*Ultrastrong washing power – it can be so easy*’].” While processing this slogan, consumers first activate a default, i.e. German-language, advertising slogan frame triggered by the first word *ultrastark*. When coming across the first English words, the expectation elicited by the activation of this frame is violated. The subsequent sequence of English words, i.e. *it can be ...*, functions as a frame-violating cue or “disjunctor” (Coulson 2001: 77–78) here, i.e. as a linguistic trigger that signals that the frame established up to this moment does not continue. However, since mixed language slogans still seem to be rare, it is unlikely that a mixed-language slogan frame is available. This means that the consumer’s mind has two options: it can switch to a frame representing English-language slogans derived from experience with the increasing number of slogans of this type, or it can process the rest of the slogan without support by frame-based knowledge. As we do not have any evidence on which of these options is more likely and have to assume that there is considerable individual variation, we will resort to the least far-reaching claim that a *frame-violation* takes place.

As frame-violation involves the disappointment of expectations, it is very likely that it requires a higher amount of cognitive processing effort. Furthermore, as claimed by Craik and Lockhart’s (1972) levels-of-processing effect (cf. also Craik and Tulving 1975), what is processed with more effort is likely to leave a stronger memory trace than what is processed in a more shallow fashion. It can therefore be assumed that mixed-language slogans should be longer retained in memory and recalled more easily than monolingual ones.

A second theory that promises to be helpful for formulating reasonable predictions about the processing and memorability of slogans is the general theory of verbal humour proposed by Victor Raskin and Salvatore Attardo (see Attardo 2001). As the name of the theory says, it covers all types of verbal humour. Puns are just one way of expressing verbal humour, as verbal humour is any “text which is capable of creating a humorous effect” (Raskin 1985: 46). On the other hand, puns are no guarantee for a humorous effect either, as they can also be serious or poetic (Okada 2012: 166).

Although puns are not the only way of expressing verbal humour, humorous puns seem to be the most frequent way of creating humorous slogans: the two senses – or scripts – in an ambiguous word convey two meanings at the same time (Redfern 1984: 130) and additionally provide an entertaining effect. This is why the present study explicitly focusses on humorous puns as a means of creating humorous slogans. The term ‘humorous slogan’ is thus used in order to describe slogans containing a humorous pun.

The key element of the general theory of verbal humour is the notion of “script opposition”, i.e. the idea that humour involves the juxtaposition of two opposing scripts (or indeed frames).² In the case of both monolingual and mixed-language puns, these scripts are triggered by the two (or more) meanings associated with one form. The pun serves as the so called “logical mechanism” connecting the two scripts. For example, in August 2015 the German food company *ültje* started a remarkable campaign advertising nuts using videos and billboards centred on the slogan *Kernkraft aus der Tüte* [‘Nuclear power out of the packet’]. *Kernkraft* [‘nuclear power’] functions as a wordplay because a literal reanalysis of the lexicalized compound yields the reading ‘the power of nuts’. From the perspective of the general theory of verbal humour, the pun co-activates two opposing scripts, one evoking the positive associations linked to nuts and their nutritional potential, and another one evoking the possibly rather negative associations connected to nuclear power. It is the contrast between the two scripts that is intended to bring about the humorous effect of the slogan.³ Additional humorous support is delivered by the quite daring move to evoke negative feelings. As in the case of frame-shifting, the extra processing effort required for working out the humour is likely to result in deeper processing and better memory performance.

Obviously, the two theories do not generate competing predictions, but are instead highly compatible. The two key notions, *frames* and *scripts*, are known to be theoretical constructs with very similar semantic scopes (see Ungerer and Schmid 2006: 212–217). In fact, the notion of frame-shifting has been used to explain humour, e.g. by Coulson (2001). The main differences between the two theories are that frame-shifting focuses on what is involved in taking the mind from one frame to another and remains open for explaining all kinds of frame-shifts, including humorous ones, while the general theory of verbal humour highlights the nature of the opposition between the knowledge structures activated and is restricted to humour. Based on these considerations and relying on

2 “A chunk of structured semantic information [...], the script can be understood for the purposes of this article as an interpretation of the text of a joke” (Attardo and Raskin 1991: 307–308). Although we generally make a distinction between the terms ‘frame’ and ‘script’ (see Ungerer and Schmid 2006: 213–214), due to this definition, they can be used interchangeably here.

3 However, *ültje* might have hoped to override the negative associations connected with nuclear power with its positive features such as an enormous energy supply. This is in line with Attardo’s (1994: 143–173) observation that puns might not only have a script opposition, but also a resolution. Without this resolution, the advertising slogan might not be correctly understood.

the cautious notion of frame-violation, we predict that the mental effort required for processing the four types of slogans investigated in this study increases from type 1 to type 4 (see also Tab. 1):

- 1. non-humorous monolingual slogans do not cause a frame-violation nor do they require humour processing;
- 2. non-humorous mixed-language slogans cause a frame-violation, but do not require humour processing;
- 3. humorous monolingual slogans require humour processing – which involve a process akin to frame-shifting – but do not involve an additional frame-violation caused by a shift from one language to another;
- 4. humorous mixed-language slogans both require humour processing and cause an additional frame-violation

Tab. 1: Predictions concerning mental efforts required for processing of four types of slogans (1 lowest effort, 4 highest effort)

	monolingual	mixed-language
	1	2
– humorous	– frame-violation – humour processing	+ frame-violation – humour processing
	3	4
+ humorous	– frame-violation + humour processing	+ frame-violation + humour processing

3 Hypotheses

These predictions easily translate into concrete test hypotheses if we follow the Craik and Lockhart rationale that deeper processing results in better memory performance. Therefore, we assume that the combination of humour and language shift will have the highest positive effect on recall, while no humour and no language shift will have the least amount of recall. Humour is expected to have a stronger effect on recall than the frame-violation caused by a language shift, as understanding a pun requires processing of the two meanings of a word. Adapted to the within-subject test design and the recall task described in the next section, the hypotheses can be operationalized as follows:

- humorous mixed-language slogans will be recalled by a larger number of participants in a recall task than

- humorous monolingual slogans, which will in turn be recalled by a larger number of participants than
- non-humorous mixed-language slogans, which will in turn be recalled by a larger number of participants than
- non-humorous monolingual slogans.

4 The Design of the Study

The aim of the experiment was to test people's ability to retain and recall different types of slogans. Essentially, test participants were first given a list of slogans and brands and asked to judge whether or not they found the slogans funny. The point of this instruction was to make sure that participants processed all slogans with sufficient depth. Following a simple distractor task, they were then confronted with another list where either brands or slogans were missing, and the participants were asked to fill in the slogans they remembered. The expectation was that participants' ability to recall slogans would differ as predicted by the hypotheses formulated in 3 above.

4.1 Participants and Setting

78 students enrolled in the English programme at LMU Munich participated in the pen and paper study. 63 of the participants were female, 15 male, with ages ranging from 19 to 29 years. As they were students of English who had passed an entry test, all of them can be considered highly proficient learners of English. The experiment was conducted in a lecture room at LMU Munich with all participants carrying out the task at the same time. The data of nine participants who pointed out that they had a limited command of German were removed, as they might not have been able to process and understand the German-English slogans sufficiently.

4.2 Material and Method

In order to rule out potential confounding effects of associations with existing products and brands, all slogans and brands were invented. Six fictional slogans and brands were designed for each of the four target conditions, yielding a total of 24 stimuli pairs. The stimuli are listed in Tab. 2.

Tab. 2: Fictional slogans and brand names used as stimuli for recall task

Humorous mixed-language	Humorous monolingual
Ich cun mehr – read Cun magazine [‘I can do more – read Cun magazine’] <i>Magazine “Cun”</i>	The Popup you can’t block <i>Lemonade “Fresh” with a swing top</i>
Fass dich nicht kurz. Make it a Brief. [‘Don’t make it short. Make it a letter’] <i>Postal services “PST”</i>	I dig Herdig <i>Company for gardening tools “Herdig”</i>
Genie in a bottle. [‘Genius in a bottle’] <i>Energy drink “Rasant”</i>	Simply good coPhi <i>Coffee brand “Phi”</i>
Get Ritt of no sleep. <i>Bedding company “Ritt”</i>	Sleep in your ComfortZone <i>Bedding brand “ComfortZone”</i>
I want it All. [‘I want it galaxy’] <i>Telescope brand “Starviewer”</i>	As tasty as can bee <i>Honey brand “Neumarkter Waldblütenhonig”</i>
Liebling deiner Katze: Pöhrrrrrr. [‘Favourite of your cat: Pöhrrrrrr’] <i>Cat food brand: “Pöhr”</i>	There’s no time for being out of order. <i>Folder system “BIG”</i>
Ihre Gesundheit – it comes first. [‘Your health – it comes first’] <i>German pharmacies “Deutsche Apotheken”</i>	Making the world Cuneo since 1959 <i>Italian furnishing company “Cuneo”</i>
Wir haben the Sage drive. [‘We have the Sage drive’] <i>Car company “Sage”</i>	Get-togethers can be everywhere. <i>Social network “Dee”</i>
Gebraut in Bayern, but brewed for the world. [‘Brewed in Bavaria, but brewed for the world’] <i>Beer brand “Benedikt”</i>	Aim higher, go further. <i>Computer brand “Pepels”</i>
Geldanlagenberatung the Karer way. [‘Investment advisory services the Karer way’] <i>Bank institute “Karer”</i>	A beer for the wild things in life. <i>Beer brand “Dudworth”</i>
Non-humorous mixed-language	Non-humorous monolingual
Schneebrett made in Bavaria. [‘Snowboard made in Bavaria’] <i>Snowboard brand “Fähnlein”</i>	A mobile Yerus for life. <i>Mobile phone brand “Yerus”</i>
Urlaubsglück? Kuhn, please. [‘Holiday happiness? Kuhn, please’] <i>Travel agency “Kuhn”</i>	Compton chooses every book with love. <i>Bookshop “Compton”</i>

In order to reduce the strain on participants and the risk of fatigue effects, monolingual German slogans were not included in this study, even though they would have been helpful as a baseline (see below for further discussion). A pilot study testing whether participants were able to identify the humorous and non-humorous slogans was conducted in order to confirm that all fictional slogans, particularly the mixed-language and humorous ones, were understood as intended (but see footnote 5).

The following considerations motivated the design of the slogans: the humorous element in all humorous slogans consists of a pun, i.e. an ambiguous word endowed with the potential to evoke two opposing scripts (cf. section 2). The humorous mixed-language slogans were constructed in such a way that both language frames had to become active even if only one word – or in fact the spelling of one word – indicated the language mixing.⁴ Three out of the six slogans for each condition contained the brand name, the other three did not. A close association between slogan and brand name was essential for the design of all study slogans. Reliance on very specific types of world knowledge (e.g. details about technical products) and sexual innuendo in the puns were avoided as potential confounds.

All 24 slogans were presented on one A4-sheet. The order of slogans was randomized to reduce priming effects between slogans and fatigue effects for later slogans in the test group. Participants were not informed about the aims of the study and were allowed 5 minutes to go through the 24 pairs of brands and slogans and to tick for each of the slogans whether or not they found them funny. Two ideas motivated this task: first, it was hoped that the decision whether or not a slogan was humorous would ensure a certain depth of processing. And second, the participants' decisions provided information as to whether they grasped the intended puns. The analysis of the task sheets confirmed that the slogans that were intended to be humorous were generally recognized as such by the participants (see Section 5.1 for more details).⁵

After completion of the first sheet, participants were asked to come up with five German and English words each that rhyme with Germ. *Haus* and Engl.

⁴ This seems to be typical of mixed-language (German-English) puns.

⁵ The slogan "Schneebrett made in Bavaria" was not intended to be humorous. Sebastian Knospe and Alexander Onysko have rightly pointed out that it is likely to be understood as punning on two interpretations of the German form *Schneebrett*: the literal and conventional meaning 'snow slab' and the literal translation of E. *snowboard*, which is the conventionalized loanword for referring to snowboards in German. Their impression is in fact confirmed by the pretest that asked participants to judge whether a given slogan was funny, in which this slogan was an outlier labelled funny by more participants than six out of the 12 humorous slogans.

house respectively. The point of this short distractor task was to ‘reset’ participants’ associative networks and give them a very brief opportunity to consolidate their memory traces.

In the next step, participants were asked to complete lists of the type illustrated in Tab. 3 (note that sheets differed due to randomization).

Tab. 3: Sample task sheet for recall task

Werbefeld / Markenname	Slogan
Handymarke „Yerus“	_____
Postservices „PST“	_____
_____	Aim higher, go further.
Geschäft für Gartenzubehör „Herdig“	_____
Biermarke „Benedikt“	_____
Bettenverkauf „Ritt“	_____
Autofirma „Sage“	_____
Deutsche Apotheken	_____
Kaffeemarke „Phi“	_____
_____	I want it All.
_____	Get-togethers can be everywhere.
_____	The popup you can’t block.
_____	A beer for the wild things in life.
_____	As tasty as can bee.
Zeitschrift „CUN“	_____
_____	There’s no time for being out of order.
_____	Genie in a bottle.
_____	Schneebrett made in Bavaria.
Bankinstitut „Karer“	_____
Reisebüro „Kuhn“	_____
Buchhandlung „Compton“	_____
Italienische Einrichtungsfirma „Cuneo“	_____
Katzenfutter „Pöhr“	_____
Bettenmarke „ComfortZone“	_____

Although there are 12 slogans in Tab. 3 which mention the brand and 12 which do not, three of the brands have a strong connection with the slogan (e.g. the

slogan of the mailing service PST includes the German word *Brief*, ‘letter’, which is very closely associated with the notion of mailing services). Therefore, it was assumed that participants would find it much easier to recall these brands than others. For this reason, they were moved to the left column of the task sheet, which asks participants to recall the slogan and not the brand. Removing brand names from three other slogans in order to move them to the right column and therefore re-establishing the 12–12 division was not possible, as the humorous slogans often include a play on words with the brand name in order to achieve their humorous effect. Overall, the task sheet involves 15 slogans and 9 brands that needed to be recalled.

5 Results

5.1 Data Analysis

The main criterion for the analysis of the test results was the number of participants who were able to reproduce the slogans and brand names they had seen on the first sheet. Precise expectations regarding the outcome were formulated in the hypotheses spelled out in Section 3. The participants’ performance ranged between completely correct and missing answers, with various possibilities between those extremes, e.g. answers that were generally okay, but flawed by missing words, deviant spellings and other more or less strong modifications of the original slogans or landmarks. In order to do justice to this cline of recall performance, the following rating system was devised: 1 point was assigned to slogans which rendered 100 per cent correctly; 0.75 points were awarded to answers containing one wrong or missing word; 0.5 points to answers that were fragmentary but clearly reflected that the humour in the slogan had been understood; missing and otherwise seriously flawed answers were not given any points at all. Concerning the recall of landmarks, 1 point was given for a correct recall of the field of advertisement and the landmark, 0.75 points for answers that named the landmark, 0.5 points for answers that showed that subjects could recall the field of advertising. A wrong recall of landmark and / or field of advertising or no recall at all did not earn any points.

5.2 Descriptive Statistics

5.2.1 Recall of Slogans

Tab. 4 and Fig. 1 summarize the results of the recall task for the 15 slogans. The table ranks the 15 items in terms of recall rates and gives their features. The figure is colour-coded for easy identification of trends in the results: humorous slogans are in white, non-humorous ones in black; monolingual slogans are shown in one colour, mixed-language slogans are indicated by fading from white to light-grey or black to dark-grey respectively.

Tab. 4: Results of slogan recall task

Rank	Recall index	Item	+/-humour	+/-mixing
1	57.25	Get Ritt of no sleep	humorous	mixed-language
2	48	I dig Herdig	humorous	monolingual
3	43	Gebraut in Bayern, but brewed for the world	non-humorous	mixed-language
4	41.25	Sleep in your ComfortZone	humorous	monolingual
5	37.5	Simply good coPhi	humorous	monolingual
6	27.65	Ich cun mehr – read CUN magazine	humorous	mixed-language
7	23.25	Fass dich nicht kurz. Make it a Brief	humorous	mixed-language
8	23	Liebling deiner Katze Q Pöhrrrrrrr	humorous	mixed-language
9	18	Ihre Gesundheit – it comes first	non-humorous	mixed-language
10	17.5	Wir haben the Sage drive	non-humorous	mixed-language
11	13.75	Compton chooses every book with love	non-humorous	monolingual
12	13	Urlaubsglück? Kuhn, please	non-humorous	mixed-language
13	9.75	Making the world Cuneo since 1959	non-humorous	monolingual
14	5.5	A mobile Yerus for life	non-humorous	monolingual
15	2	Geldanlagenberatung the Karer way	non-humorous	mixed-language

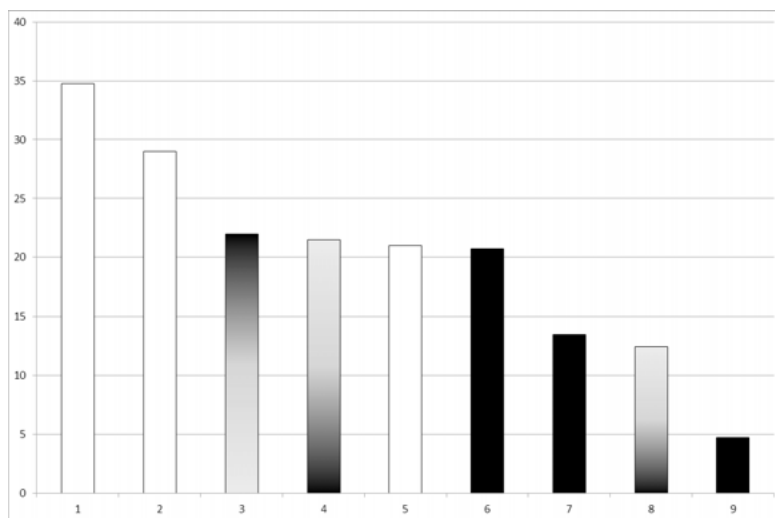


Fig. 1: Visualized results of slogan recall task

The bright bars on the left-hand side of Fig. 1 indicate a strong tendency for humorous slogans to be recalled by a larger number of participants than the non-humorous ones rendered in darker shading. This is in line with our expectations. The only ‘outlier’ with regard to this dimension is item 3 (*Gebraut in Bayern, but brewed for the world*, [‘Brewed in Bavaria, ...’]). Its recall rate might have been influenced by uncontrolled confounds such as alliteration. The effects with regard to language mixing are generally less clear, mainly because the items ranked second, fourth and fifth are monolingual humorous slogans which were suspected to be recalled less well than the mixed-language humorous ones found in ranks six, seven and eight.

Tab. 5 shows the findings for the four conditions and provides basic statistical summaries. These findings confirm the visual information given in Fig. 1 regarding the dimension ‘humour’: maximums, minimums and both measures of central tendencies for slogans with humorous puns are higher than those for non-humorous ones. For the dimension ‘mixed-language’, however, the situation is less clear and in fact not in line with the expectations. While the prediction that mixed-language slogans are retained better than monolingual ones is confirmed for non-humorous slogans, the data yield the reverse and in fact unexpected finding for slogans with humorous puns: minimum, mean and median for monolingual humorous slogans are higher than those for mixed-language humorous ones. We will come back to this finding in the discussion in section 6.

Tab. 5: Descriptive statistical summary of slogan recall

	+ humorous	+ humorous	– humorous	– humorous
	+ mixed (n = 4)	– mixed (n = 3)	+ mixed (n = 5)	– mixed (n = 3)
Maximum	57.25	48	43	13.75
Minimum	23	37.50	13	5.50
Range	34.25	10.50	30	8.25
Mean	32.79	42.25	18.7	9.67
Median	25.45	41.25	17.5	9.75

5.2.2 Recall of Brand Names

The pattern of findings regarding the recall of brand names primed by slogans supports the one for slogans in some respects. Here, as shown in Tab. 6 and Fig. 2, humorous slogans (indicated in white in the figure) produce a better recall rate for brand-names than the non-humorous slogans.

Tab. 6: Summary of results of brand name recall task on brand names

Rank	Recall index	Item	+/-humour	+/-mixing
1	34.75	There's no time for being out of order	humorous	monolingual
2	29.00	Tasty as can bee	humorous	monolingual
3	22.00	Schneebrett made in Bavaria	non-humorous	mixed-language
4	21.50	Genie in a bottle	humorous	mixed-language
5	21.00	The popup you can block	humorous	monolingual
6	20.75	Get-togethers can be everywhere	non-humorous	monolingual
7	13.50	A beer for the wild things in life	non-humorous	monolingual
8	12.50	I want it All	humorous	mixed-language
9	4.75	Aim higher, go further	non-humorous	monolingual

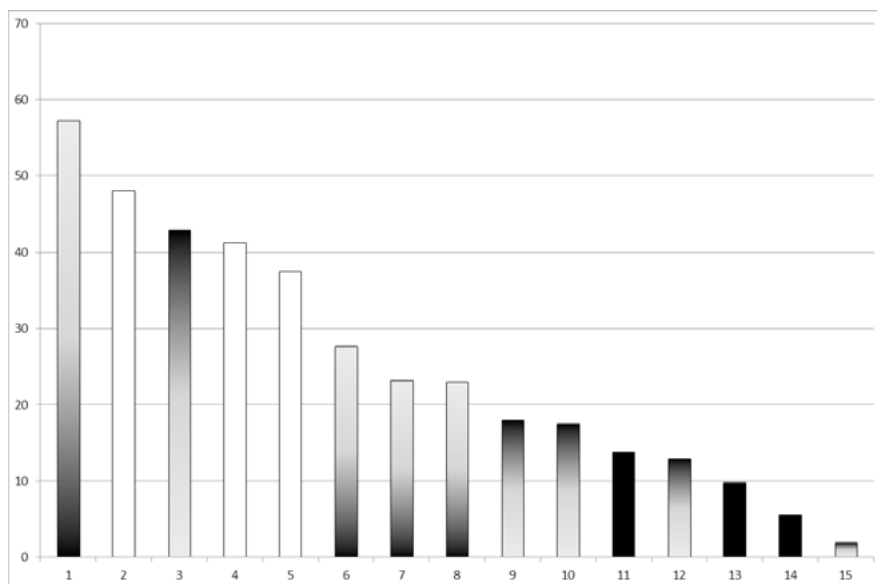


Fig. 2: Visualized results of brand name recall task

As before, however, the results for the dimension mixed-language vs. monolingual run counter to expectations for humorous slogans. This shows in the comparison of the three solid white bars with the two fading into grey. Since two of the four conditions, humorous mixed-language and non-humorous mixed language, are represented only by two items (4 and 8) and one item (3) respectively, there is not much point in adding up these results and reporting central tendencies and measures of dispersion.

5.3 Significance Testing for Aggregated Results

In order to check the differences observed in the recall test for statistical significance, the results from the recall of brand names and the recall of slogans were aggregated. Medians of the aggregated results for the four conditions were as follows:

- (1) humorous monolingual slogans: med = 36.125
- (2) humorous mixed-language slogans: med = 23.125
- (3) non-humorous mixed-language slogans: med = 17.75
- (4) non-humorous monolingual slogans: med = 11.625

Significance was tested by means of three pair-wise comparisons of the four conditions using the Wilcoxon-sign-rank test. Humorous monolingual slogans (1) were compared to humorous mixed-language slogans (2); non-humorous mixed-language slogans (3) were compared to non-humorous monolingual ones (4); and humorous mixed-language slogans (2) were compared to non-humorous mixed-language slogans (3). The results of all three comparisons indicated that the observed differences are significant on the level of $\alpha = 5\%$.

6 Discussion

The results of our study indicate that in line with our expectation, humorous slogans are generally recalled better than non-humorous ones. It is very likely that the extra effort required for humour processing and perhaps the stronger resonance of ‘funny’ slogans renders them more memorable than non-humorous slogans. However, the results regarding the interaction between humour and language mixing did not confirm our expectations. While we predicted that humorous mixed-language slogans would be retained by a larger number of participants than humorous monolingual slogans, the study yielded the reverse picture. Various explanations of this finding seem possible.

First, all monolingual slogans were formulated in English. As participants were instructed in German, and as their native and dominant language is indeed German, it is possible that the required switch from German to English was sufficient for reaching a deeper level of processing. In addition, even though English-language slogans are increasingly used on the German market (see above), it could be the case that they are still less familiar to many consumers than German-language slogans and therefore not represented by equally strong frame-based knowledge. This explanation alone, however, does not seem to be able to account for the finding, because from the first slogan presented onwards, participants were confronted with a mixture of German and English and thus primed to expect mixed-language slogans.

Second, it is possible that the mixed-language puns were too difficult to make sense of even for the highly proficient test group of students of English Studies, especially because they tended to involve the need to build a fairly complex connection between English and German word meanings and the concepts encoded by them, or required paying extra attention to the graphemic and phonological level of language. For example, the item with the lowest recall rate in the group of humorous mixed-language slogans, *I want it All*, only signalled the German element by the capital <A> in *All*. If this signal went unnoticed, the

pun was missed as well. Although the pilot study and the results of the first task sheet in the real study consistently indicate that the humour was recognized, it is still possible that some participants found these cases funny for some other reason, without actually spotting the pun involved.⁶

Third, the findings can be explained with the help of the cognitive overload theory developed by John Sweller. In a 1988 essay dealing primarily with problem-solving activities and their effects on learning and schema acquisition, Sweller argues that “conventional problem solving [...] requires a relatively large amount of cognitive processing capacity which is consequently unavailable for schema acquisition” (Sweller 1988: 257). This large amount of cognitive processing leads to a “heavy cognitive load” (Sweller 1988: 284), which in turn might cause a lower level of retention and ability for recall. Transferring Sweller’s claims to the present study, it could be argued that the combination of frame-shifting and humour processing required for understanding humorous mixed-language slogans results in some sort of cognitive overload, impeding participants’ ability to retain and store these slogans better than monolingual humorous ones. This overload could be aggravated, as mentioned above, by the fact that the participants’ dominant language is German.

A fourth potential and particularly promising explanation builds on Sperber and Wilson’s (1996) relevance theory. In this approach, relevance is defined as a “theoretical term to refer to the cognitive utility of a piece of information in a context, or for an individual at a given time” (Sperber and Wilson 1996: 531). It involves two aspects: cognitive effect (the benefit) and processing effort (the cost). The processing benefit is “to allow fixation or revision of beliefs” (Sperber and Wilson 1996: 531), whereas the processing cost relates to the cognitive effort required to reach such a belief. According to Huang (2007: 18), contextual effects, i.e. benefit, are “the outcome of an interaction between a newly impinging stimulus and a subset of the assumptions that are already established in a cognitive system.” These assumptions can be conceived of as being represented in the form of frames and scripts. The notion of relevance captures the balance of benefit and cost. The desired aim in communication is to have maximal relevance, which is achieved by having minimal processing costs, but maximal benefit (Sperber and Wilson 1992: 67). However, high cost can also ‘pay off’ if it promises high benefit.

Transferring this approach to our study, we should first make it clear that the predictions we have formulated relate to cost: we have assumed that the

⁶ This is possible because verbal humour does not necessarily involve a pun – cf. section 2.

highest processing effort is required for mixed-language humorous slogans, followed by monolingual humorous slogans, mixed-language non-humorous and monolingual non-humorous ones. If cost was the only parameter of relevance, nothing would be gained for a deeper understanding of the result that monolingual humorous slogans were retained better than mixed-language humorous slogans. However, the contextual effects also have to be taken into account. What our results suggest is that the processing of humorous slogans generally yields greater benefits than that of non-humorous slogans. This is in line with research on humour from a relevance-theoretical perspective. Referring to the comprehension of jokes, Yus claims that “the eventual amusement and even laughter will make up for the effort involved in processing the joke” (Yus 2016: 51). The processing of frame-violations, on the other hand, only costs, but does not gain more. Therefore monolingual humorous slogans seem to strike the ideal balance between cost and benefit, whereas mixed-language humorous slogans require more effort without yielding more benefits.

Pending further research (see section 7), we assume that the explanation in terms of relevance theory provides the most promising interpretation of our findings.

7 Open Questions and Future Research

The study and its results presented here are only a first step towards a more systematic investigation of the effects of wordplay and language mixing on the retention and recall of slogans. Some shortcomings have to be redressed in future work.

First, the stimuli differ in terms of length and linguistic complexity. This is a potential confound that has to be controlled for in future studies.

Second, the study involved only English-language monolingual slogans. As the default slogan in a German context is monolingual German, slogans of this type – both humorous and non-humorous ones – should be included in future studies to serve as a baseline.

Third, the types of products and brand names used while inventing the slogans may well differ in terms of the types and emotive values of the associations triggered. For example, beer, banking and bedding may not resonate in the same way in the group of participants. The outlier observed in Section 5.2.1, for example, *Gebraut in Bayern, but brewed for the world*, may well have been more memorable for the participants because of the strong cultural associations between beer and Bavaria. Another reason for its ‘success’ could lie in the phono-

logical appeal residing in the alliteration. This should be taken into account in future studies, for example by harvesting a much larger dataset and using sophisticated statistical ways such as mixed effects regression models in order to assess the effects of individual slogans or product types.

Fourth, the current results derive from a target group of young academics who are highly proficient in English as a foreign language. It is very likely that one should not transfer them to other groups of consumers. Proficiency in English is certainly a key factor when it comes to understanding English and German-English slogans, especially when they rely on wordplays for their effects. Further research that we are currently planning will therefore focus on diverse target groups, not only in terms of education, but also age and proficiency in English.

Fifth, retention and recall were measured almost immediately after processing the slogans. This design leaves open whether longer-term memory traces, especially after sleep-induced memory consolidation (cf. Takashima and Bakker forthcoming), follow the same pattern regarding the effects of the four conditions. Since the cognitive overload theory suggests that a cognitive overload impedes schema acquisition, and since the formation of schemas is a key component of memory consolidation, it does not seem unlikely that the impeding effects of cognitive overload caused by humorous mixed-language slogans turn out to be even stronger if participants are tested again after some days or weeks.

8 Conclusion

Despite its programmatic nature, the present study may have the potential to offer some worthwhile theoretical and practical considerations. As regards the former, our results strongly indicate that slogans containing wordplay and humour in general are processed differently from non-humorous slogans, and that this may have a positive effect on memorability. Concerning humour and language-mixing, more research is needed to understand the interaction between them. With regard to practical implications, our study suggests that advertisers operating in the German-speaking market might be well advised to consider the potential effects of language mixing and humour in the design and choice of slogans.

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