Pun recognition in L1 and L2 readers

Seven days without a pun makes one weak.

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Abstract

Language play has an important position in the use of language. Cook (in Lucas, 2005) makes the argument that language play is even one of the primary uses of language. Partly due to the focus on research in second language learning, advanced L2 users’ language processing gets little attention in research on language use (Shaw & McMillion, 2008). Therefore, there is limited knowledge regarding the reading processes of this group.

While Shaw and McMillion (2008) show that there is no difference in language proficiency between L1 and advanced L2 readers, Paradis (2009) argues that there indeed is a difference in processing among L1 and advanced L2 speakers. Gernsbacher and Robertson (1995) examined the differences in processing between more and less skilled L1 readers using ambiguous words and puns. However, this kind of research has not been done for L1 and advanced L2 readers.

A study concerning the speed and ability in pun recognition was carried out to investigate whether any differences could be found between L1 and advanced L2 readers, with the same language proficiency. Tests in accuracy and speed in recognizing puns were carried out with university students in Stockholm and Los Angeles, while a survey investigating degree of amusement was distributed online.

Initial hypotheses assumed that L1 readers, compared to L2 readers, would be both more skilled and faster at identifying a number of categories of puns as well as perceiving all categories of puns as being more amusing. Results show support for some of these hypotheses: L1 speakers were faster and more accurate in finding certain categories of puns. However, other categories showed no difference, and results were not able to prove differences in degree of amusement between the two groups. Questions about other categorizations of puns are raised, as well as further research opportunities.

Keywords
L1 readers, native language readers, second language readers, advanced L2 readers, pun recognition, language processing, speed, accuracy, puns, degree of amusement.
1. Introduction

While scholars have long ignored language play as not being directly related to the function of language as an information exchange system (Redfern, 1984), recently language play has received more attention in applied linguistic theory (e.g. Cook, 1997; Lucas, 2005). Cook (in Lucas, 2005), for example, argues that the primary use of language is not communication or social interaction, but rather language play “in its various forms: lies, fictions, fantasy and games” (Lucas, 2005 p. 222). In this respect, the importance of language play for L1 users raises questions about advanced L2 users and their ability to ‘play along’. Shaw and McMillion (2008) argue that little research has been carried out concerning advanced L2 users’ language processing, rendering it unclear as to how they differ from L1 users. The comprehension of ambiguous phrases in general, and puns in particular, might shed some light on these differences.

Paradis (2009) argues that advanced L2 speakers seldom reach the same level of automated language processing as L1 speakers. Even though advanced L2 users might reach the same proficiency level in reading (Shaw & McMillion, 2008), the difference in decoding processes might have an impact on L2 users’ ability to recognize language play in the form of puns.

Giora (2003) suggests that sentences with joke endings are less salient than more conventional sentences. The differences in the automatization process between L1 and L2 speakers (Paradis, 2009), might suggest that there should also be a difference in degree of amusement between the groups L1 and advanced L2 readers.

The aim of this paper is to explore whether a comparison of pun comprehension between L1 and advanced L2 readers can tell us anything about language processing. The study also aims to investigate whether or not different categories of puns show any distinctive differences between the two groups. Finally, this paper aims to examine whether differences in language processing relate to the degree of amusement of puns.

The following research questions guide this paper: How do L1 readers and advanced L2 readers compare in their 1) ability and 2) speed to identify puns? Is there a measurable difference between the groups in the degree of amusement perceived in a set of puns?

The initial hypothesis was that L1 readers, due to differences in language processing, can better identify puns, as well as experiencing a higher degree of amusement from them, than L2 readers with a high degree of language proficiency. To test this hypothesis, L1 and L2 university students were given a test regarding their ability and speed in recognizing puns in written sentences. In addition, a survey to discover degree of amusement of recognized puns was sent out via e-mail.

The results of this study provide some evidence for these hypotheses. However, some interesting results in the different categories of puns, as well as for degree of amusement, raise new questions about the processing of puns.
2. Background

2.1 An introduction to puns

This section defines some of the terms used in this paper and discusses the different categories of puns as well as why they were chosen for this research.

The *Encyclopædia Britannica* defines a pun as “a humorous use of a word in such a way as to suggest different meanings or applications, or a play on words.” Partington (2009) broadens the definition of a pun from a word to a *phrase*, and argues that ambiguity in itself does not produce a pun—the intention must be humor. However, Partington argues that even though the intention of the speaker was not humor, the receiver can create a pun but pointing it out, as is common with unscripted puns, i.e. puns that occur spontaneously in daily discourse. However, the present study only investigates scripted, i.e. pre-constructed puns. For the purposes of this research, a pun is defined as *an intended humorous play on the ambiguity of words and phrases*.

Previous scholars (e.g. Reah, 1998; Partington, 2009; Hempelmann, 2004) have organized puns into different categories (though there are no clearly agreed upon categories and categories may change depending on the needs of the researcher). Some have classified puns based on pronunciation and spelling of the focal word (Reah, 1998) and others make the divide between exact and near puns (Partington, 2009).

To get a broader perspective and perhaps draw some conclusions regarding the differences between L1 and L2 readers’ processing, the puns chosen for this study represent three categories: 1) exact puns that are homonymic (same spelling, same pronunciation), 2) exact puns that are homophonic (different spelling, same pronunciation) and 3) near puns. In the analysis, I also include two additional categories: 1) culturally marked puns and 2) first clause puns. These puns can be homonymic, homophonic or near.

2.1.1 Main Categories

2.1.1.1 Exact homonymic puns

In the exact homonymic pun, the focal word is spelled and pronounced exactly the same way (homonym). For example:

(1) Time flies like an arrow. *Fruit flies* like a banana. ¹

(2) A library should have several floors because it is a *multi story* building.²

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¹ The focal words have been italicized on all the puns exemplified in this paper. However, they were not italicized in the test material.

² There might be an argument made for the focal word *multi-story* to be hyphenated. However, this is the way it was presented to the respondents, and therefore it is the way it is presented in this paper.
The puns play with the phrases *fruit flies* (the fruit is flying/plural of the small fly that feeds on fruit) (1) and *multi story building* (a building with several floors/a building containing multiple stories (i.e. books)) (2). The focal words are both spelled and pronounced the same.

### 2.1.1.2 Exact homophonic puns

With the exact homophonic pun, the focal words are spelled differently but pronounced the same. For example:

(3) A bicycle can’t stand alone; it’s *too* tired.

(4) A cardboard belt would be a *waist* of paper.

Here the play is on the phrases *too tired/two tired* (has two tires) in (3) and *waist of paper/waste of paper* in (4) and the humor is created by choosing the least expected alternative to create an unexpected meaning of the sentence.

### 2.1.1.3 Near puns

The focal word in a near pun is, as the label might suggest, not exact in either spelling or pronunciation. Instead, it resembles another word phonetically as the examples below will demonstrate.

(5) If you can’t find anyone to sing with you have to *duet* yourself.

(6) You can make *antifreeze* by stealing her blanket.

The puns play with the similarity between *duet/do it* (5) and *antifreeze/auntie freeze* (6) respectively. This kind of pun is also known as imperfect or heterophonic puns (e.g. Zwicky & Zwicky, 1986 and Hempelmann, 2004).

### 2.1.2 Additional categories

#### 2.1.2.1 Culturally marked puns

Scholars have established that people will have different reactions to, and understanding of, puns depending on their own experiences. For example, “Hoey stresses that different people will have different lexical primings due to different real-world experiences, which explains in part how jokes and wordplay can have varying effects on individuals” (Partington, 2009 p. 1800). Similarly, given the cultural differences between L1 and L2 users, there may be a difference between these two groups when it comes to puns that demand a better understanding of the culture referred to in the pun. For example:

(7) When the smog lifts in Los Angeles, *UCLA*.

(8) Lincoln was the least guilty president. He is *in a cent*.
With no knowledge that UCLA in is an abbreviation of University of California Los Angeles in (7) or that the President engraved in the one-cent coin is Lincoln in (8), these puns will fail.

2.1.2.2 First Clause Puns

Gernsbacher and Robertson (1995) found that both more and less skilled L1 readers are able to activate several meanings of ambiguous words but that only more skilled readers could suppress both the appropriate and inappropriate meanings. Suppressing the inappropriate meanings is, Gernsbacher argues, what makes skilled L1 readers faster at comprehending puns than less skilled L1 readers. As mentioned above, Shaw and McMillion (2008) show that Swedish L2 university students do not differ in reading skill from their L1 counterparts. The kind of test Gernsbacher et al. (1995) performed has not been done for advanced L2 readers, who, according to Paradis (2009), differ from L1 speakers in the way they process language. A possible way to test readers’ ability to suppress meanings is to try to get them to activate meanings that will lead them up the garden path (Harley, 2008). Puns, that have their focal word in the first clause of the sentence³, will first activate one meaning (M₁), but after having read the second clause, the reader is forced to activate a second meaning (M₂) of the first clause. To test this notion, a set of first clause puns was added to the study. For example:

(9) Two men walk into a bar. The third one ducks.

(10) The best way to stop a charging bull is to take away his credit card.

The focal words in (9), bar (pub/rigid object), and in (10), charging (attack/record cost), are both in the first clause. This probably activates pub/attack as M₁, leading the reader up the garden path. However, after having read the full sentence, the reader has to activate rigid object/record cost as M₂ in order to comprehend the meaning of the each sentence.

3. Data and Methodology

In order to measure the relationship between puns and language processing, two studies were conducted that compared L1 and L2 readers’ ability to identify and understand puns: a computer test (later referred to as the test) administered with one group of respondents and an online survey (later referred to as the survey) sent out via e-mail to a separate group of respondents. The purpose of each part was slightly different. The computerized test measured accuracy and reaction times in recognizing sentences containing puns, while the survey aimed at measuring how amusing respondents found a set of puns.

For the two studies, 25 puns were selected to represent the different categories discussed above: 12 were homonyms, 5 were homophones and 8 were near puns. Besides these three categories, the two additional categories with 5 first clause puns and 4 cultural puns were

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³ Even though these kinds of puns are referred to as First Clause puns, the pun can, as seen in example (10), start with a noun phrase.
analyzed separately. In addition, fifteen sentences for the first study and five for the second were included as a control. They were produced to resemble the structure of puns but did not contain any puns. This category was used to test whether respondents actually recognized the puns they claimed to recognize. All these sentences are presented in the appendix.

Both studies contained a survey that aimed to find out more about the respondents’ attitudes toward English. This was done to see whether the L2 speakers had any particular negative or positive attitudes regarding English. The L2 speakers were almost completely positive towards the spread of the English language in Sweden; out of all 66 L2 respondents in both studies only five did not find it positive. 73 % of the participating L2 speakers claim that they use English several times a week or more.

### 3.1 The computerized test

During three weeks in the spring of 2010, students at Stockholm University and the University of California, Los Angeles (UCLA) were tested using the program Superlab. For this particular project, the program was used to present the respondent with a series of sentences. Respondents were instructed to react to these sentences, indicating whether they recognized a pun or not. The program measured the respondents’ reaction time from the presentation to the response. The respondents were informed that the test was timed but that the focus was on correctness. All the puns and non-puns were used in the test and they were presented to all the respondents in the same order. The respondents were approached and informed about the study and asked if they had time to participate.

A total of 60 people were tested, 31 claimed L1 proficiency in English and 29 did not. The test sample was obtained using convenience sampling of students at the respective universities. Because the sample consisted of a student-age population, the mean age in the test is fairly low (mean age for L1: 23.5 yrs and L2: 24.5 yrs). The majority of the L2 speakers were Swedish (79 %). The gender spread was fairly even in both groups (L1: 55 % female and 45 % male, L2: 45 % female and 55 % male). The respondents were asked to fill out the highest level of education that they had completed, with the following alternatives:

<table>
<thead>
<tr>
<th>Education Level</th>
<th>L1</th>
<th>L2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Didn’t complete high school</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>High School</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Currently enrolled in college</td>
<td>65</td>
<td>52</td>
</tr>
<tr>
<td>Some college (currently not enrolled)</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Bachelor</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>Masters</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>JD/MD</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>PhD</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
3.2 The Survey

The survey was conducted via e-mail and respondents answered it online. In this sample, no particular population was singled out, though the aim was to get a fairly equal response rate between L1 and L2 speakers. The survey was divided into two parts, the first containing the puns and the second part consisting of the same background and attitude questions as the computer-administered test. Out of the 76 people responding to the survey, 39 claimed L1 proficiency and 37 did not.

For the first part of the test, all the puns and 5 non-puns were included, for a total of 30 sentences. For each sentence, the respondent was asked to mark one of the following five choices: “Hilarious and/or Very clever”, “Funny and/or Clever”, “Not funny and/or Not clever”, “Not a pun” and “Don’t understand”. The sentences were presented in a different order than in the test, however, they were not randomized for each respondent. The respondents were explicitly told to answer all the questions in the survey before submitting.

The survey was completely anonymous since it was taken online and it was protected via IP-addresses so that the respondents could only answer once. The population for the survey reached a slightly higher age average than the computer-based test. The reason it did not reach older respondents was probably due to the way it was distributed. The survey had an age average of L1: 27 yrs and for L2: 30 yrs. The gender spread fairly even (L1: 49 % female and 51 % male, L2: 59 % female and 41 % male). The majority of the respondents had completed or were currently enrolled in higher education, as seen in the table below. As in the test, they were asked to fill out the highest level of education that they had completed.

<table>
<thead>
<tr>
<th>Education Level</th>
<th>L1</th>
<th>L2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Didn’t complete high school</td>
<td>0 %</td>
<td>3 %</td>
</tr>
<tr>
<td>High School</td>
<td>0 %</td>
<td>5 %</td>
</tr>
<tr>
<td>Currently enrolled in college</td>
<td>18 %</td>
<td>14 %</td>
</tr>
<tr>
<td>Some college (currently not enrolled)</td>
<td>0 %</td>
<td>14 %</td>
</tr>
<tr>
<td>Bachelor</td>
<td>69 %</td>
<td>32 %</td>
</tr>
<tr>
<td>Masters</td>
<td>8 %</td>
<td>16 %</td>
</tr>
<tr>
<td>JD/MD</td>
<td>3 %</td>
<td>16 %</td>
</tr>
<tr>
<td>PhD</td>
<td>3 %</td>
<td>0 %</td>
</tr>
<tr>
<td>Other</td>
<td>0 %</td>
<td>0 %</td>
</tr>
</tbody>
</table>
3.3 Data Analysis

After the computerized data was collected, it was entered into spreadsheets and analyzed. Puns were divided into their respective categories, mentioned above, to see whether there were any significant differences in the answers. Respondents were awarded 1 point for each correctly determined sentence (pun or not a pun). Mean and standard deviation for scores and times were calculated for L1 and L2. To measure and illustrate the range and median, the data was put into box plots (fig. 1 (accuracy) and fig. 3 (speed)). Bar graphs (fig. 2 (accuracy) and fig. 4 (speed)) with the different categories were added for descriptive purposes.

Next, statistical testing was conducted using the statistical program STATA. Differences between L1 and L2 speakers in accuracy (a categorical variable) were conducted using chi² tests for each sentence. The overall difference (all of the sentences combined) between the two groups and the different categories was measured with a multi-level mixed logistic regression. To measure differences in speed of recognition (a continuous variable) for each sentence, t-tests were used. To measure overall differences and different categories, a multi-level mixed-effects linear regression was used to find whether the differences between the two groups were statistically significant.

The written survey responses were entered into spreadsheets. To be able to measure degree of amusement, each answer was given a score, Not funny 0 points, Funny 1 point and Hilarious 2 points. This score was then calculated as a mean in order to compare the different puns’ degree of amusement between L1 and L2. A box plot, comparing L1 and L2 was created (fig. 5). A Wald-test was done to test the significance of the amusement score.

3.4 Possible weaknesses

An important part of degree of amusement as well as comprehension of puns is intonation, which was not tested in this study. As this study used only written tests and aimed to test processing of written texts, the intonation of the puns was not considered relevant.

Since the respondents were actively looking for puns in the sentences presented, one might argue that the automatization process might have been weakened for some of the respondents. However, automated processing of language is not something that can be turned on or off (Paradis, 2009).

One of the puns used in the study has been incorrectly identified and analyzed as a near pun, even though it is in reality a homophonic pun (“Atheism is a non-prophet organization”).

4. Results

The results presented below will describe the differences between L1 and L2 readers regarding accuracy and speed in recognizing a pun in a presented sentence, as well as results from the amusement survey. The three variables: accuracy, speed and degree of amusement are presented separately and each is divided into the various categories of puns. Individual puns that stand out are presented and examined separately.
4.1 Accuracy

The descriptive results show that L1 speakers more accurately distinguish between sentences that contain puns and those that do not. (See Fig. 1 and Table 1). Fig. 1 shows box plots for both L1 and L2 speakers. The box (25th to 75th percentile) for L1 speakers is in the higher range of scores than the L2 box. The median score for L1 speakers is 31; for L2 speakers, the median score is 28. Interestingly, no respondent successfully identified all 40 of the sentences. The maximum score was 36 for L1 speakers and 34 for L2 speakers; the minimum score was also higher for L1 speakers, with 23 correct identifications compared to a low of 17 correct identifications for L2 speakers.

![Figure 1. Box plot for accuracy](image)

Table 3 shows the average accuracy score per respondent, out of a possible score of 40. L1 speakers scored approximately three points higher on the average.

<table>
<thead>
<tr>
<th></th>
<th>Mean Score</th>
<th>St Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>31.29</td>
<td>3.43</td>
</tr>
<tr>
<td>L2</td>
<td>28.10</td>
<td>3.88</td>
</tr>
</tbody>
</table>

Fig. 2 describes the accuracy in percent between L1s and L2s for the different pun categories. On the whole, we can see that L1 speakers are more accurate in finding puns than
L2 speakers, and this difference is statistically significant ($\chi^2 = 11.87, p = 0.0006$). Broken down further into categories of puns, Table 2 shows that L1 speakers achieved higher levels of accuracy in each category. However, the only categories that showed a significant difference were homophonic ($p = 0.001$) and near puns ($p = 0.000$). Giora (2003) argues, in regards to salience – “to be foremost on one’s mind” (Giora, 2003 p. 15) – that frequency, familiarity, conventionality and prototypicality are key elements in describing how salient a word or phrase is. In the case of homophonic puns, this might be an explanation as to why L1 readers more accurately identified these kinds of puns.

![Figure 2. Accuracy. Percent per category](image)

Hempelmann (2004) argues that near puns can exhibit a considerable contrast between the focal word and its target. The question here, he says, is how great that contrast can be and still allow for comprehension of the pun. The significant difference shown for near puns may suggest that there is a difference between L1 and L2 readers in how great that contrast can be. The focal word in sentence # 36 below ($\chi^2 = 7.5203, p = 0.006$, for accuracy) could be argued to have too great a contrast for L2 speakers to recover the target meaning.

# 36. Hotel maids are experts with *spreadsheets.*

The sentence with the greatest significant difference in accuracy, and in which the fewest L2 speakers were able to identify the pun, was sentence # 2 ($\chi^2 = 13.02, P = 0.00$). In the focal phrase, *turn pail/turn pale*, the expected adjective is replaced by a noun, which, if one is familiar with *pail*, is very clear (Giora, 2003). However, lacking familiarity with *pail*
could make the “misspelling” of pale seem irrelevant. Since L2 speakers were not able to recognize the pun, it is plausible that they lack familiarity with the word pail.

# 2. Drinking a whole bucket of water could make you turn pail.

One of the sentences that really stood out was sentence # 9. This was the only sentence for which L2 speakers’ accuracy was higher than L1. (p = 0.05, \(\chi^2 = 3.858\))

# 9. We were so poor when I was growing up we couldn't even afford to pay attention.

The focal phrase pay attention is, for L1 speakers, a fixed expression. “Empirical findings […] suggest that salient meanings of fixed expressions may override those of their individual words” (Giora, 2003 p. 19). This suggests that pay attention is indeed not a fixed expression for L2 speakers but that it is for L1 speakers.

4.2 Speed

To measure how fast the two groups (L1 and L2 readers) could distinguish puns from non-puns, their reaction speed for each presented sentence was measured. L1 readers were faster, though not significantly faster, over all.

Fig. 3 displays the differences in speed per pun between L1 and L2 readers. We see that the fastest respondents among L2 readers are as fast as the fastest L1 readers. L1 readers are less spread out and have a lower median time. The fastest L2 speeds might be a clue to why the difference between L1 and L2 readers is not statistically significant. As seen in Fig. 4 below, this coincides well with the mean times compared to each other.
Fig. 4 displays differences in reaction times for L1 and L2 speakers. Even though L1 speakers show faster reaction times in all the different categories, the difference is only significant in two of them: first clause (p=0.013) and near puns (p=0.033).
It is interesting that even in connection with the speed variable, near puns show a significant difference. As a consequence of the arguments based on Hempelmann (2004) in the accuracy section above (p. 9), the result for near puns in speed may not be very surprising.

Sentence # 38 below ($t = -3.5156, p = 0.0009$) exemplifies a first clause pun, which as a category, showed the greatest significant difference in speed between L1 and L2. The results show L1 speakers do indeed determine the M2 more rapidly. This could perhaps be explained by the differences in processing suggested by Paradis (2009).

# 38. Two fish are in a tank. One says to the other “I’ll man the guns, you drive.”

### 4.3 Amusement

In the amusement category no significant difference could be found between the two groups. Not even in any of the different categories of puns could any significant difference be shown. This is interesting in the light of the hypothesis that L1 speakers would find puns more amusing due to their difference in processing.

Fig. 5 shows that the two groups are fairly spread out and that there are respondents in both groups that find puns in general both funny and not funny. The two groups seem to have the same spread, while L1 is slightly higher.

![Figure 5. Box plot for degree of amusement between L1 and L2.](image-url)
5. Discussion

This paper has investigated the relationship between language processing and the understanding and degree of amusement of puns. L1 readers turned out to be significantly more successful at finding puns in general, though they were not significantly faster at doing so. One of the hypotheses for this study was that L1 speakers would find puns more amusing than advanced L2 speakers due to their differences in processing. However, the study did not find evidence to support the hypothesis for this variable. Furthermore, cultural puns showed no significant difference in either category of measurement. This category of pun was included to see whether possible cultural differences could influence the understanding of certain puns.

The additional category of first clause puns showed significant differences in speed between L1 and L2. These first clause puns slow both groups down, though L2 readers, who may be processing the sentences more consciously (Paradis, 2009), slow down to a greater extent. Even though advanced L2 readers have the same reading proficiency as L1, they seem to process first clause puns the same way as less skilled readers do (Gernsbacher et al, 1995).

Near puns was the only category that showed a significant difference in both variables of speed and accuracy. Hempelmann (2004), referred to in the results section, does not bring up the question of language comprehension among L2 readers. He does, however, allude to the fact that near puns can be so disparate in their focal-target representation that understanding can be impaired. It would be reasonable to suspect that L1 readers’ automated processing skills give them an advantage over L2 readers in comprehending near puns.

The homophonic pun in sentence # 2 (examined in the accuracy section of Results above) shows a very highly significant difference in accuracy for L1 and L2. However, it could be argued that this sentence is not prototypical for homophonic puns. The probable unfamiliarity for L2 readers with the focal phrase turn pail seems to override the homophonic aspect. This discrepancy should be further investigated.

Interestingly, and somewhat surprisingly, there was one sentence where L2 speakers had significantly higher accuracy than L1 speakers. One reason for this might be that the pun in question (# 9, examined in the accuracy section of Results above) has a focal phrase that might be too automated for L1 speakers to detect. As Giora (2003) argues, L1s are probably reading the focal phrase pay attention as a single lexical item. This would suggest that the two groups do indeed process the sentences in different ways, even though they are both actively looking for puns.

The significant differences shown in this paper partly support the hypothesis that there is a relationship between pun comprehension and language processing. The study has given diverging results; on the one hand, the study was not able to show major differences between L1 and advanced L2 readers’ comprehension and amusement of puns. On the other hand the results suggest that automated processing gives an advantage for understanding certain categories of puns, as well as hindering understanding of others.

Further research is needed to shed light on puns that have lexical units with two or more words that are processed by L1 speakers as single units (e.g. pay attention). In addition, as mentioned earlier in the discussion, research is needed to examine whether or not homophonic
puns such as # 2 (pail/pale) are more difficult for advanced L2 readers to comprehend, due to their unfamiliarity with the focal words. One possible method would be to investigate vocabulary and pun comprehension simultaneously. The research that Gernsbacher et al. (1995) presented, show a need for research in suppression among L2 readers. Even though Paradis (2009) discusses suppression, he does explore the question of processing ambiguity.

Finally, we can note that neither of the two groups were particularly amused by the set of puns chosen for this study, so even though seven days without a pun makes one weak, too many puns in one sitting might make you soar.
References


StataCorp. (2009). Stata Statistical Software: Release 11. College Station, TX: StataCorp LP.

Appendix

List of sentences used in study (Category/ies in parentheses).
1. I wondered why the baseball was getting bigger. Then it hit me. (Homonym)
2. Drinking a whole bucket of water could make you turn pail. (Homophone)
3. The best way to stop a charging bull is to take away his credit card. (First Clause, Homonym)
4. As she walked up the bank, she felt a sudden urge to jump into the river. (Non-Puns)
5. Two men walk into a bar. The third one ducks. (First Clause, Homonym)
6. A grenade thrown into a kitchen in France would result in Linoleum Blownapart. (Cultural, Near)
7. Even before the break, the classroom was completely divided. (First Clause, Homonym)
8. Lincoln was the least guilty president. He is in a cent. (Cultural, Near)
9. We were so poor when I was growing up we couldn't even afford to pay attention. (Homonym)
10. When a snowman begins to fall apart, spring is on its way. (Non-Puns)
11. When the smog lifts in Los Angeles, U C L A. (Cultural, Homophone)
12. A library should have several floors because it is a multi story building. (Homonym)
13. As she rounded the corner, she ran into a large man. (Non-Puns)
14. Farmers are real experts - they are often outstanding in their field. (Homonym)
15. If a pig loses weight it is tasteless. (Non-Puns)
16. The jeweler only rides the bus to work when the sun shines. (Non-Puns)
17. She slipped on a dress, got up and ran to the bus. (Non-puns)
18. A notice of eviction is never good news. (Non-Puns)
19. There is no way to make a ballerina sit still. (Non-Puns)
20. The twin monks who rang church bells died. They were dead ringers. (Homonym)
21. You can make antifreeze by stealing her blanket. (First Clause, Near)
22. Time flies like an arrow. Fruit flies like a banana (Homonym)
23. Those who jump off a Paris bridge are in Seine. (Cultural, Near)
24. A door is not a door when it is ajar. (Homophone)
25. Whether life is worth living, depends on the liver. (Homonym)
26. He was into his forties when he drove into the water hole. (Non-Puns)
27. The prosecutor found good grounds on which she could build her house. (Non-Puns)
28. Doctors feel fine on ships because they are accustomed to see sickness. (Near)
29. A bus driver has to look around before driving out from the station. (Non-Puns)
30. Long haired dogs are less likely to stray. (Non-Puns)
31. If you can't find anyone to sing with you have to duet yourself. (Near)
32. A bicycle can’t stand alone; it’s too tired. (Homophone)
33. A cardboard belt would be a waist of paper. (Homophone)
34. He had been training badminton for months and felt that he was on track. (Non-Puns)
35. The teaching assistants decided that it was time to go on strike. (Non-Puns)
36. Hotel maids are experts with spreadsheets. (Near)
37. Santa's helpers are subordinate clauses. (Homonym)
38. Two fish are in a tank. One says to the other "I'll man the guns, you drive" (First Clause, Homonym)
39. The correct answer was written on his right hand. (Non-Puns)
40. Atheism is a non-prophet organization. (Near)