

## LISTS OF SPANISH SENTENCES WITH EQUIVALENT PREDICTABILITY, PHONETIC CONTENT, LENGTH, AND FREQUENCY OF THE LAST WORD<sup>1</sup>

TERESA CERVERA

*University of Valencia*

JULIO GONZÁLEZ-ALVAREZ

*University Jaume I*

**Summary.**—This paper presents a pool of Spanish sentences designed for use in cognitive research and speech processing in circumstances in which the effects of context are relevant. These lists of sentences are divided into six lists of 25 equivalent high-predictability sentences and six lists of 25 low-predictability sentences according to the extent to which the last word can be predicted by the preceding context. These lists were also equivalent in phonetic content, length and frequency of the last word. These lists are intended for use in psycholinguistic research with Spanish-speaking listeners.

The assessment of the effects of context on recognition of spoken words has been the subject of extensive research in cognitive science and language processing. It has been firmly established that a preceding context favors the recognition of a word compared to words in isolation (Miller, Heise, & Lichten, 1951; Duffi & Giolas, 1974). The context imposes syntactic and semantic constraints which increase the predictability of the last word in the sentence.

The evaluation of speech intelligibility is a specific area of research in which this question is especially relevant. If the intention of the researcher is to approach everyday communicative situations as much as possible, then sentences are the most appropriate speech stimuli. However, in the recognition of sentences, sensory or bottom-up information interacts with top-down or linguistic information provided by the sentence's context. The most frequent way to assess the relative contribution of bottom-up and top-down information has been to present to listeners short sentences containing a contextual part and a final word. The listeners must respond by providing the final word. The contribution of the context to the recognition of the final word can be assessed by comparing the proportion of correct responses in high-predictability sentences with the responses in low-predictability sentences, on the assumption that increased contextual information contributes to a better understanding of the final word (Kalinkow, Stevens, & Elliot, 1977).

The evaluation of speech intelligibility is especially important in certain situations such as background noise or with certain types of lis-

<sup>1</sup>Address correspondence to Teresa Cervera, Ph.D., Departamento de Psicología Básica, Universitat de Valencia, Blasco Ibáñez 21, 46010 Valencia, Spain or email (Teresa.Cervera@uv.es).

teners such as elderly persons (Perry & Wingfield, 1994; Pichora-Fuller, Schneider, & Daneman, 1995; Gordon-Salant & Fitzgibbons, 1997; Sommers & Danielson, 1999; Dubno, Ahlstrom, & Horwitz, 2000; Wingfield, Tun, & McCoy, 2005; Pichora-Fuller, 2008). In such listeners, decreases in sensory information due to loss of auditory acuity, especially under adverse listening conditions involving background noise or voices, can be compensated by top-down information provided by the context. With the aim of equating perceptual properties of the sentences, speech materials are constructed to be equivalent in certain relevant characteristics such as length and phonetic content. In addition, the properties of the final word or target word must be controlled. Thus, these words must also be equivalent in their main characteristics such as length, syntactic category (nouns are usually used), stress, and, principally, frequency of the word. The influence of word frequency on spoken-word recognition is well-known since the studies of Samuel (1981) and Marslen-Wilson (1987), and plays a fundamental role in speech perception theories (Forster, 1981; McClelland & Elman, 1986; Marslen-Wilson, 1987).

In the English language, the speech materials which satisfy all of these requisites are the SPIN (Speech Perception in Noise) sentences (Kalikow, *et al.*, 1977). In these materials, two types of sentences are used: high-predictability sentences whose final word can be somewhat predicted by the preceding context, and low-predictability sentences whose final word cannot be predicted by the context. The same final words appear in the high- and low-predictability sentences. By comparing the recognition performance of individuals on these two types of sentences, separate effects of auditory acuity and cognitive processing, expressed as capability of using the context to recognize the final word, can be assessed. This type of testing is especially important for elderly listeners because they frequently present with age-related decreased auditory acuity (presbycusis) and, in some cases, age-related cognitive decline (Committee for Hearing, Bioacoustics, and Biomechanics, 1988). Better performance on high- than on low-predictability sentences is expected to be independent of the hearing status of the listeners. Thus, if no such differences are found, some deficiencies in cognitive processing might be suspected.

The effect of context on recognition of the subsequent word for other types of listeners also is a relevant issue. One example would be nonnative listeners having differences in second language proficiency. Nonnative speech communication is known to be less effective than native communication (Flege, 1995). Nonnative listeners take less advantage of the context than native listeners do. Differences in the recognition of high- and low-predictability sentences would presumably indicate the extent to which the nonnative listeners are fluent enough to profit from the se-

mantic and syntactic information provided by context (Mayo, Florentine, & Buus, 1997). Thus, the use of high- and low-predictability sentences is appropriate for assessing the type of sensory or cognitive processes involved in sentence processing by bilingual listeners. In addition, the use of high- and low-predictability sentences by audiologists has demonstrated their efficacy in the evaluation of hearing-impaired listeners (Hutcherson, Dirks, & Morgan, 1979).

Several listening conditions have been used in examining high- and low-predictability sentences, including background noise at different signal-to-noise levels (Kalikow, *et al.*, 1977; Gordon-Salant & Fitzgibbons, 1999, 2001, 2004; Dubno, *et al.*, 2000; Gordon-Salant, Fitzgibbons, & Friedman, 2007; Humes, Burk, Coughlin, Busey, & Strauser, 2007), fast speech (Gordon-Salant & Fitzgibbons, 1999, 2001, 2004; Humes, *et al.*, 2007; Gordon-Salant, *et al.*, 2007), same versus different speakers' voices (Goy, Pichora-Fuller, van Lieshout, Singh, & Schneider, 2007), or some speech distortions such as jitter (Pichora-Fuller, Schneider, MacDonald, Pass, & Brown, 2007) or noise-vocoded speech (Sheldon, Pichora-Fuller, & Schneider, 2008).

The high- and low-predictability sentences have also been used to evaluate the extent to which elderly listeners may benefit from context, both in perception and recall. Working memory capacity (Baddeley & Hitch, 1974) was assessed by Pichora-Fuller, *et al.* (1995) using an auditory version of the Daneman and Carpenter task for reading materials (Daneman & Carpenter, 1983). In the study by Pichora-Fuller, *et al.* (1995), participants were asked to report the final word of the sentence immediately after hearing the sentence and to successively maintain a number of these final words in memory until they were asked to recall them at the end of a set of sentences. Finally, the availability of several equivalent lists of high- and low-predictability sentences is useful when it is necessary to test the same individuals on several occasions over a period of time.

Although these questions are interesting regardless of the native language of the individuals, most studies have been conducted with English-speaking participants and English-language materials. To date, there are no sets of high- and low-predictability sentences in the Spanish language similar to those for the English language (SPIN sentences) for use by researchers and clinicians. The Hearing in Noise Test (HINT), originally developed by Nilsson, Soli, and Sullivan (1994) and adapted to the Castilian Spanish language by Huarte (2008), uses sentences as speech material but the distinction between high and low predictability is not contemplated in these lists. In the present study, equivalent sets of high- and low-predictability sentences were generated. The final pool consisted of six high-predictability lists of sentences, and six low-predictability lists, each list com-

prising 25 sentences. These lists were equivalent on predictability, but also on other characteristics such as length, phonetic content (both the whole sentence and the last word), syllabic structure, word stress, and frequency of the final word. The length of the sentence is an important characteristic because processing the sentence cannot take so long that it requires extensive memory. It is also important because there is a positive relation between sentence length and effects of the context on the recognition of the last word (van Petten & Kutas, 1990). On the other hand, as the sentences are constructed for use in differentially assessing sensory and cognitive processing of the sentence, an important property of the sentence (including the last word) which must be balanced is the phonetic content.

At the same time, controlling the characteristics of the last word is also important, as this word (rather than the whole sentence) is normally required as a response because it simplifies the listener's task, and it is faster and easier for the researcher or clinician to evaluate. The last words used in the present study were also equivalent in frequency of occurrence. All the words are bisyllabic and accented on the first syllable (instead of the monosyllabic words used in the English language) because this structure is the most frequent one in the Spanish language. These lists of sentences, which are equivalent in predictability, length, and final word frequency, are suitable for use in psycholinguistic research with Spanish-speaking participants in those circumstances in which sensory reception and cognitive processing (context effects) are important factors to be considered.

## METHOD

### *Procedure*

*Selecting the last word of sentences.*—The first step in generating the sentences was to select the words which would be the last words in the sentences. After that, the sentences were generated. Following the procedure by Kalikow, *et al.* (1977), the last word in the sentence must be a noun, but it has to be bisyllabic and have the stress on the first syllable as this is the most representative syllabic structure in Spanish, rather than the mono-syllabic words preferably used in the English language. Another requirement was that all the words have a similar frequency index. The words could not be little used or very frequently used. The measure of frequency of occurrence used was one word per million in the Spanish written language from the Alameda and Cuetos' corpus (1995). The words selected had a frequency of between 16 and 41 per million, and they were nouns, bisyllabic, and stressed on the first syllable. The initial pool consisted of 240 words.

*Generation of sentences.*—The next step was to generate a high-predictability sentence and a low-predictability sentence for each of the 240

words. The low-predictability sentences were formed with the target word preceded by a neutral context such as "No temas hablar de ..." ("Don't be afraid to talk about ...") or "Carlos habló sobre ..." ("Carlos talked about ..."). The high-predictability sentences were generated by using the last word preceded by a context semantically connected with that word, such as "Llegó una hora tarde a su cita" (He/she arrived an hour later to his/her appointment) or "Tengo el dinero en el banco" ("I have the money in the bank"), but without the key word being the only possible word. Proverbs, sayings, maxims, adages, etc., were avoided. All sentences with both high and low predictability had a similar length of seven to 10 syllables, and they had a variety of syntactic structures.

*Predictability of the sentences and initial selection.*—The 210 high-predictability sentences were judged on their predictability by a group of 150 participants, students at the University of Valencia from 21 to 26 years of age who participated voluntarily and gave their informed consent. All the sentences were presented as a paper-and-pencil test without the last word in the sentence (e.g., "Tengo el dinero en el . . ." "I have the money in the . . ."). The listeners were instructed to fill in the last word of the sentence according to what they thought was the most likely word to occur. They were told that the last word was a bisyllabic noun stressed on the first syllable. The task was performed in different sessions over a period of several weeks.

For each sentence, the number of responses which coincided with the last word, transformed into percentages (of the total number of participants' answers), was taken as the measure of sentence predictability. From the initial pool of 240 sentences, those sentences whose predictability was between 10% and 90% were selected. This way, the sentences of very high or very low predictability were excluded. The total number of selected sentences was 168. Of these 168 sentences, 150 were randomly selected and randomly assigned to the six lists of 25 high-predictability sentences. The 18 remaining sentences were not used.

The means and the standard deviations for the values of predictability for each of the six lists of sentences were calculated (Table 1). As the intention was to have lists homogeneous in predictability values, the present objective was to obtain similar mean values for all the lists. To confirm that the six lists did not differ statistically on their predictability values, a one-way ANOVA was conducted with the predictability scores for each sentence (expressed in percent) as a dependent variable and the list to which the sentences belonged (list) as an independent variable with six levels. Analysis showed no significant effects of list ( $F=0.59$ ,  $p>.05$ ;  $\eta^2=0.02$ ), therefore, the six lists did not differ with respect to the predictability of the last word.

TABLE 1

MEANS AND STANDARD DEVIATIONS FOR THE MEASURES OF PREDICTABILITY (%) AND FREQUENCY OF THE LAST WORD IN THE SENTENCE IN THE LIST OF HIGH-PREDICTABILITY SENTENCES

|        | Predictability |      | Frequency |       |
|--------|----------------|------|-----------|-------|
|        | M              | SD   | M         | SD    |
| List 1 | 0.40           | 0.23 | 26.50     | 12.48 |
| List 2 | 0.39           | 0.24 | 26.72     | 7.34  |
| List 3 | 0.38           | 0.26 | 28.50     | 8.33  |
| List 4 | 0.36           | 0.23 | 31.36     | 15.01 |
| List 5 | 0.38           | 0.22 | 28.90     | 14.38 |
| List 6 | 0.40           | 0.28 | 25.86     | 14.38 |

*Frequency of the last word.*—From the initial pool of 240 words selected from Alameda and Cuetos' corpus (1995), only 150 (six lists of 25 sentences, Table 1) were finally used in a preceding high- or low-predictability sentence, as explained above. Because it was necessary to test whether the frequency values of the last word were similar for the six lists, a one-way ANOVA was conducted on values of frequency of the last word, obtained from Alameda and Cuetos' corpus (1995) as the dependent variable, and list as the independent variable with six levels. There were no significant effects of list ( $F=0.11$ ,  $p>.05$ ;  $\eta^2=0.05$ ), indicating that the six lists did not differ with respect to the frequency of the last word.

*Phonetic content.*—Another aim of the present study was for the six lists of 25 high-predictability sentences to have similar phonetic content in case these lists were to be used in intelligibility experiments. For this purpose, the phonetic balance of the speech materials should be controlled. For the low-predictability sentences this question was not as relevant because the same 25 preceding contexts were used in each of the six lists. The phonetic counts were performed separately for the last words of the 150 high-predictability sentences and for the whole high-predictability sentence (the preceding context plus the last word). In these counts, only content words (verbs, nouns, and adjectives) were taken into account, and articles, prepositions, and adverbs were not considered. The phonetic count was calculated by counting the number of occurrences of segments in each phoneme class (occlusives, fricatives, nasals, liquids, and vowels). Phonetic content calculations were performed by the authors. No special training in phonetics is needed for this task because the correspondence between phoneme and letter is almost biunivocal in the Spanish language.

A distribution of frequencies for each phoneme class was obtained for each of the 150 sentences (the whole sentence). The total distribution made it possible to specify whether any of the sentences deviated in the number of occurrences in any of the phoneme classes. For instance, the table of frequencies for the occlusives showed that most of their values ranged from

1 to 4, and only one sentence had 5 occlusives. Thus, this sentence was replaced by one of the remaining 18 sentences from the initial distribution of sentences to the six lists. The new sentence had to have approximately the same predictability as the one which was replaced. Only one sentence had to be replaced by another. Table 2 shows the number of occurrences of each phoneme class for the six lists of high- and low-predictability sentences.

TABLE 2  
PHONETIC COUNTS BY NUMBER OF OCCURRENCES IN EACH PHONEME  
CLASS FOR LAST WORD AND WHOLE SENTENCE, FOR BOTH HIGH-  
PREDICTABILITY (HP) AND LOW-PREDICTABILITY (LP) SENTENCES

| List   | Count Type        | Phoneme Class |            |        |         |        |
|--------|-------------------|---------------|------------|--------|---------|--------|
|        |                   | Occlusive     | Fricatives | Nasals | Liquids | Vowels |
| List 1 | Last word         | 24            | 14         | 3      | 15      | 48     |
|        | HP whole sentence | 80            | 38         | 23     | 52      | 171    |
|        | LP whole sentence | 93            | 49         | 39     | 59      | 213    |
| List 2 | Last word         | 21            | 10         | 7      | 15      | 48     |
|        | HP whole sentence | 75            | 35         | 41     | 37      | 172    |
|        | LP whole sentence | 90            | 45         | 43     | 59      | 210    |
| List 3 | Last word         | 18            | 16         | 11     | 11      | 50     |
|        | HP whole sentence | 81            | 37         | 39     | 44      | 176    |
|        | LP whole sentence | 87            | 52         | 47     | 55      | 214    |
| List 4 | Last word         | 26            | 19         | 7      | 13      | 56     |
|        | HP whole sentence | 71            | 49         | 25     | 48      | 184    |
|        | LP whole sentence | 95            | 54         | 43     | 57      | 222    |
| List 5 | Last word         | 24            | 15         | 10     | 14      | 55     |
|        | HP whole sentence | 81            | 37         | 35     | 46      | 179    |
|        | LP whole sentence | 93            | 50         | 46     | 58      | 220    |
| List 6 | Last word         | 26            | 15         | 10     | 15      | 50     |
|        | HP whole sentence | 83            | 39         | 37     | 52      | 172    |
|        | LP whole sentence | 95            | 50         | 46     | 59      | 219    |

To test whether all the sentences of each type (high and low predictability) had equivalent phonetic content, a  $\chi^2$  analysis was performed with the counts obtained from the phonetic content analysis for each sentence type. Phoneme class (occlusives, fricatives, nasals, liquids, and vowels) and list (six levels) were included as factors. The  $\chi^2$  values were not significant for the high- or low-predictability sentences ( $\chi^2=19.30$ ,  $df=20$ ,  $p>.05$ , and  $\chi^2=2.80$ ,  $df=20$ ,  $p>.05$ , respectively). Thus, the six lists of high- and low-predictability sentences did not differ in their phonetic content. The final lists of high- and low-predictability sentences are presented in the Appendix (pp. •••-•••).

#### DISCUSSION

The objective was to generate equivalent lists of high- and low-predictability Spanish sentences, as none existed for use in the Spanish lan-

guage. Such sentences have many applications in the psycholinguistics, especially in those circumstances in which one would be interested in assessing the sensory or bottom-up processing and the cognitive (effective use of context) or top-down processing skills of the listeners during language processing. The six lists of 25 high-predictability sentences and the equivalent six lists of 25 low-predictability sentences were generated. All sentences were equivalent on characteristics of predictability, length, and phonetic content. As the last or key word is normally used in testing effective processing of a sentence by the listener, it was also necessary to control the properties of these words: frequency of occurrence, length, stress, and phonetic content. The data showed that all the lists of high- and low-predictability sentences were equivalent in these characteristics. These lists are intended for use in psycholinguistic research and they would be suitable for an intelligibility assessment in future studies.

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## APPENDIX

## LISTS OF HIGH-PREDICTABILITY SENTENCES WITH THEIR EQUIVALENT LISTS OF LOW-PREDICTABILITY SENTENCES

| High-predictability Sentences | Last Word | Low-predictability Sentences   | Last Word |
|-------------------------------|-----------|--------------------------------|-----------|
| List 1                        |           | List 1                         |           |
| En el castillo se alza la     | torre     | Ha estado pronunciando         | torre     |
| La explosión causó un         | caos      | Ellos escribieron              | caos      |
| Iba vestida con falda y       | blusa     | Pronuncia la palabra           | blusa     |
| Ata el regalo con una         | cinta     | Ahora voy a decir              | cinta     |
| Guardo el dinero en el        | bolso     | Ella dijo la palabra           | bolso     |
| Me tocó el primer             | premio    | Y a continuación dijo          | premio    |
| Es un gran salón de           | baile     | No temas hablar del            | baile     |
| Hay que limpiar, hay mucho    | polvo     | No discutieron sobre el        | polvo     |
| El río sigue por su           | cauce     | Tu oíste que decía             | cauce     |
| El ladrón pertenece a la      | banda     | Está interesado en decir       | banda     |
| Amontónalo en una             | pila      | Juan no discute de la          | pila      |
| Disparó con las flechas el    | arco      | Espero que hables de un        | arco      |
| Cruzó el charco de un         | salto     | La niña sabía decir            | salto     |
| Le gusta escurrir el          | bulto     | Laura no pudo hablar del       | bulto     |
| Lleva la compra en la         | bolsa     | Les oí que hablaban de una     | bolsa     |
| Me convenció con malas        | artes     | Carlos habló sobre las         | artes     |
| Bebe la leche de la           | taza      | Deberías poder decir           | taza      |
| No suelen comer carne de      | cerdo     | Estábamos pensando en un       | cerdo     |
| Nos recibió en pijama y       | bata      | Ayer Luis soñó con una         | bata      |
| De la cloaca salió una        | rata      | Ellos no consideraron la       | rata      |
| Se revolcó en el suelo        | barro     | Laura estaba pronunciando      | barro     |
| En el cielo hay bandadas de   | aves      | Es probable que hablen de unas | aves      |
| Son auténticos perros de      | caza      | No creas que voy a decir       | caza      |
| Soplaba una suave             | brisa     | Lo que esta describiendo es la | brisa     |
| Todo se repite es un          | ciclo     | Adivina lo qué es un           | ciclo     |
| List 2                        |           | List 2                         |           |
| Voy al museo de               | cera      | Ha estado pronunciando         | cera      |
| Pronto alcanzarán la          | cima      | Ellos escribieron              | cima      |
| Iba cargado como un           | burro     | Pronuncia la palabra           | burro     |
| Llegó una hora tarde a su     | cita      | Ahora voy a decir              | cita      |
| Dicen que habrá un cambio de  | clima     | Ella dijo la palabra           | clima     |
| Yo estudio música y           | danza     | Y a continuación dijo          | danza     |
| Voy al trabajo en             | metro     | No temas hablar del            | metro     |
| Torció la boca en una         | mueca     | No discutieron sobre una       | mueca     |
| Tómate caliente la            | sopa      | Tu oíste que decía             | sopa      |
| Todos seguíanos al            | guía      | Está interesado en decir       | guía      |
| Tiene una casa junto a un     | lago      | Juan no discute del            | lago      |
| Tengo que podar esa           | rama      | Espero que hables de una       | rama      |
| Te has pasado de la           | raya      | La niña sabía decir            | raya      |
| Sírveme ginebra con           | hielo     | Laura no pudo hablar del       | hielo     |
| Tengo el dinero en el         | banco     | Les oí que hablaban del        | noble     |
| Se requiere vestido de        | gala      | Carlos habló sobre la          | gala      |
| Dormimos hasta el             | alba      | Deberías poder decir           | alba      |
| Se dejó la comida en el       | plato     | Estábamos pensando en un       | plato     |
| Se bebió el vino de un        | trago     | Ayer Luis soñó con un          | trago     |
| La carta lleva su             | firma     | Ellos no consideraron la       | firma     |
| Refresca mucho chupar un      | polo      | Laura estaba pronunciando      | polo      |
| Reduce la emisión de          | gases     | Es probable que hablen de unos | gases     |
| Por fin han derribado el      | muro      | No creas que voy a decir       | muro      |
| Paramos para hacer una        | pausa     | Lo que esta describiendo es la | pausa     |
| Para leer necesita            | gafas     | Adivina lo qué son unas        | gafas     |

| High-predictability Sentences  | Last Word   | Low-predictability Sentences   | Last Word   |
|--|---|--|---|
| List 3   |   | List 3   |   |
| Para entrar necesitas un<br>Colección objetos de<br>Nos guiamos siguiendo el<br>Nos despertó el canto del<br>No quiero meter la<br>Sirve a una causa muy<br>No lo acabes, guárdame un<br>No cabía en sí de<br>No arañas con esas<br>Mete la guitarra en su<br>Me obligan a seguir esa<br>Me gusta cantar en la<br>Llevaba un pañuelo de<br>Llego tarde, cogeré un<br>Los leones viven en la<br>Los católicos van a<br>Lo mediré con una<br>Le regaló un ramo de<br>Le gusta el fútbol y los<br>Le golpeó con un<br>Las maletas las lleva el<br>La sangre corre por sus<br>La pluma mancha de<br>La modista compra una<br>La lengua mas hablada es el                     | pase<br>lujo<br>mapa<br>gallo<br>pata<br>noble<br>trozo<br>gozo<br>uñas<br>funda<br>norma<br>ducha<br>seda<br>taxi<br>selva<br>misa<br>regla<br>rosas<br>toros<br>palo<br>mozo<br>venas<br>tinta<br>tela<br>chino       | Há estado pronunciando<br>Ellos escribieron<br>Pronuncia la palabra<br>Ahora voy a decir<br>Ella dijo la palabra<br>Y a continuación dijo<br>No temas hablar del<br>No discutieron sobre el<br>Tu oíste que decía<br>Está interesado en decir<br>Juan no discute de la<br>Espero que hables de una<br>La niña sabía decir<br>Laura no pudo hablar del<br>Les oí que hablaban de la<br>Carlos habló sobre la<br>Deberías poder decir<br>Estábamos pensando en unas<br>Ayer Luis soñó con unos<br>Ellos no consideraron el<br>Laura estaba pronunciando<br>Es probable que hablen de unas<br>No creas que voy a decir<br>Lo que esta describiendo es la<br>Adivina lo qué es un    | pase<br>lujo<br>mapa<br>gallo<br>pata<br>noble<br>trozo<br>gozo<br>uñas<br>funda<br>norma<br>ducha<br>seda<br>taxi<br>selva<br>misa<br>regla<br>rosas<br>toros<br>palo<br>mozo<br>venas<br>tinta<br>tela<br>chino       |
| List 4   |   | List 4   |   |
| La escayola inmoviliza el<br>La actriz no soportó la<br>Juega al ajedrez y las<br>Juan fue a un colegio de<br>Haz un hoyo con pala y<br>Hay que resolver ciertas<br>Guarda bien el dinero y las<br>En el cielo no se ven<br>Fue escrito con su propia<br>Este piso no está en<br>Estás rayado como un<br>Estaba encerrado en la<br>Es un sagrado lugar de<br>Es un consumidor de<br>Es un bolso negro de<br>Es letal a ciertas<br>Es el primero de la<br>Es el militar de más<br>Es el colmo de todos los<br>Firmó un cheque con muchas<br>Era tan fiero como un<br>Enciende la mecha de esa<br>En matemáticas es un<br>En la urna deposito el<br>En la tormenta cayó un | hueso<br>fama<br>damas<br>curas<br>pico<br>dudas<br>joyas<br>nubes<br>letra<br>venta<br>disco<br>jaula<br>culto<br>droga<br>cuero<br>dosis<br>fila<br>rango<br>males<br>cifras<br>lobo<br>vela<br>genio<br>voto<br>rayo | Ha estado pronunciando<br>Ellos escribieron<br>Pronuncia la palabra<br>Ahora voy a decir<br>Ella dijo la palabra<br>Y a continuación dijo<br>No temas hablar de unas<br>No discutieron sobre unas<br>Tu oíste que decía<br>Está interesado en decir<br>Juan no discute de un<br>Espero que hables de una<br>La niña sabía decir<br>Laura no pudo hablar de la<br>Les oí que hablaban del<br>Carlos habló sobre la<br>Deberías poder decir<br>Estábamos pensando en el<br>Ayer Luis soñó con los<br>Ellos no consideraron las<br>Laura estaba pronunciando<br>Es probable que hablen de una<br>No creas que voy a decir<br>Lo que esta describiendo es el<br>Adivina lo qué es un | hueso<br>fama<br>damas<br>curas<br>pico<br>dudas<br>joyas<br>nubes<br>letra<br>venta<br>disco<br>jaula<br>culto<br>droga<br>cuero<br>dosis<br>fila<br>rango<br>males<br>cifras<br>lobo<br>vela<br>genio<br>voto<br>rayo |
| List 5   |   | List 5   |   |
| En la cola espero mi<br>En Italia comí mucha<br>En el mar hay grandes  | turno<br>pasta<br>olas  | Ha estado pronunciando<br>Ellos escribieron<br>Pronuncia la palabra  | turno<br>pasta<br>olas  |

| High-predictability Sentences | Last Word | Low-predictability Sentences   | Last Word |
|-------------------------------|-----------|--------------------------------|-----------|
| En el mapa sigue la           | ruta      | Ahora voy a decir              | ruta      |
| En el informe nos falta un    | dato      | Ella dijo la palabra           | dato      |
| Fue herido con una            | lanza     | Y a continuación dijo          | lanza     |
| La nota mínima es un          | cero      | No temas hablar del            | cero      |
| En el camino pinché una       | rueda     | No discutieron sobre la        | rueda     |
| El viento levantó su          | falda     | Tu oíste que decía             | falda     |
| Casi me muero del             | susto     | Está interesado en decir       | susto     |
| El tren circula por las       | vías      | Juan no discute de las         | vías      |
| El silencio fue en señal de   | duelo     | Espero que hables de un        | duelo     |
| El seguro cubrirá los         | daños     | La niña sabía decir            | daño      |
| Ella cargó con toda la        | culpa     | Laura no pudo hablar de la     | culpa     |
| El rey se sienta en su        | trono     | Les oí que hablaban de un      | trono     |
| El pescador recoge las        | redes     | Carlos habló sobre las         | redes     |
| El palacio pertenece al       | duque     | Deberías poder decir           | duque     |
| El detective sigue la         | pista     | Estábamos pensando en una      | pista     |
| El barco encalló en las       | rocas     | Ayer Luis soñó con unas        | rocas     |
| El anillo se lo puso el       | novio     | Ellos no consideraron al       | novio     |
| El abuelo cuida de su         | nieto     | Laura estaba pronunciando      | nieto     |
| El poeta le escribió un       | verso     | Es probable que hablen de un   | verso     |
| Duermo con un cojín de        | plumas    | No creas que voy a decir       | plumas    |
| Devuelvo lo robado a su       | dueña     | Lo que esta describiendo es la | dueña     |
| Es austero como un            | monje     | Adivina lo qué es un           | metal     |
| List 6                        |           | List 6                         |           |
| Se despidió con un            | beso      | Ha estado pronunciando         | beso      |
| La soprano da clases de       | canto     | Ellos escribieron              | canto     |
| Corta el tallo y las          | hojas     | Pronuncia la palabra           | hoja      |
| Para abrir la puerta tengo    | llave     | Ahora voy a decir              | llave     |
| Cogió con sus garras la       | presa     | Ella dijo la palabra           | presa     |
| El tren entró en el oscuro    | túnel     | Y a continuación dijo          | túnel     |
| Canta de tenor en un          | coro      | No temas hablar del            | coro      |
| El caballo tira del           | carro     | No discutieron sobre el        | carro     |
| Al mar van a desembocar los   | ríos      | Tu oíste que decía             | ríos      |
| Al correr se me acelera el    | pulso     | Está interesado en decir       | pulso     |
| Al caer se dio en la          | nuca      | Juan no discute de la          | nuca      |
| A la miel acuden las          | moscas    | Espero que hables de unas      | moscas    |
| Deja el niño en la            | cuna      | La niña sabía decir            | cuna      |
| Brindamos alzando la          | copa      | Laura no pudo hablar de la     | copa      |
| El siempre gasta pesadas      | bromas    | Les oí que hablaban de unas    | bromas    |
| La historia tiene una buena   | trama     | Carlos habló sobre la          | trama     |
| Espere su turno en la         | cola      | Deberías poder decir           | cola      |
| Tengo asiento en primera      | fila      | Estábamos pensando en una      | fila      |
| El ratón cayo en la           | trampa    | Ayer Luis soñó con la          | trampa    |
| Acampamos con nuestras        | tiendas   | Ellos no consideraron la       | tienda    |
| El sabe como lanzar un        | dardo     | Laura estaba pronunciando      | dardo     |
| De noche hay luz de           | luna      | Es probable que hablen de la   | luna      |
| Corta la carne en pequeños    | trozos    | No creas que voy a decir       | trozo     |
| No hubo heridos en el         | choque    | Lo que esta describiendo es el | choque    |
| El árbitro hizo sonar el      | pito      | Adivina lo qué es un           | pito      |