



Sin título. Obra de Antonio Carranza (fragmento).

## Slips of the Tongue in L1 and L2 Production

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### Abstract

This paper makes an effort to briefly review some of the findings regarding the lapsus linguae or slip of the tongue research. Throughout this article, we present what a lapsus linguae (slip of the tongue) is, a wide classification of them, as well as the peculiarities when they appear in a second language production. Research findings have shown that no matter what language people speak, or what L2 linguistic stage they are in; speakers of either L1 or L2 always produce slips of the tongue concerning different linguistic components and the amount of them in each case may vary. Those findings have also revealed that the most common reason in L2 lapsus linguae production is the lack of automaticity and mastery of it; while when occurring in L, this might be produced consciously or unconsciously.

### Keywords

Slips of the tongue, L1, L2, linguistic production.



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## Errores de la lengua en producción L1 y L2

Se hace una breve revisión de algunos resultados de la investigación de los *lapsus linguae* o errores espontáneos en la producción lingüística; además se define lo que es un *lapsus linguae*, se presenta una clasificación de los mismos y algunas de sus características cuando aparecen en una L2. Los resultados de diferentes investigaciones muestran que no importa si los individuos hablan una L1 o si se encuentran en cualquier etapa lingüística de una L2; siempre producirán *lapsus linguae* relacionados con los diferentes componentes lingüísticos, y la cantidad de ellos variará en cada caso. La razón más común en la producción de *lapsus linguae* en una L2 es debido a la falta de automaticidad y dominio de la misma; mientras que en la L1 pueden aparecer de manera consciente o inconsciente.

### Palabras clave

Errores espontáneos de la lengua, lengua materna, segunda lengua, producción lingüística.

## Introduction

Slips of the tongue are something very common in everyday life, speakers produce them mainly in an unconscious manner although they notice and correct them immediately. Everybody has experienced, more than once in their lives, some slips of the tongue and it's undeniable that this happens so suddenly, that it makes us think we do not do it intentionally. The study of slips of the tongue is extremely relevant since research on it has the intention of finding out in how the brain or mind works when dealing with language.

At first sight, any language expression (oral, written or signed) takes place very quickly and all the previous work the brain does to produce it is disregarded which means that a highly complex neurological planning and execution occurs. Thus, slips of the tongue may be perceived as evidence that the brain carries out a "scanning ahead" task when selecting and ordering particular meaningful segments to make up words or even phrases (Crystal, 1998: 262).

This paper tries to briefly show how slips of the tongue are related to speech production in L1 as well as to other grammatical issues such as phonology, morphology, léxicon, and syntax. Moreover, it provides a classification of these mistakes and their relevance in L2 learners' productions.

## Neuropsychological Model of Language

In speech production, there is initially a kind of conceptualization of the message, then, this conceptualization is encoded into semantic and syntactic structures of the language used by the speaker. Next, such structures are changed into a kind of phonological representation. After that, a motor-controlled program is activated, which will coordinate a huge amount of signals that, in time, will be sent to the appropriate muscles of the vocal tract. While this phenomenon takes place, feedback is received from the ear, the senses, and the movements of the body.

"Tongue slips: involuntary departure from the speaker's intended production of a sequence of language units" (Crystal, 1998: 262). Slips of the tongue can occur in morphemes, syllables, words



and even sentences, the speaker is immediately aware of them and correct them. Sigmund Freud considered slips of the tongue as an unconscious outcome caused by a mental conflict in an individual; they are also seen as mechanisms of language change and evolution. Latest research has uncovered that tongue slips are not at random, but the result of some constraints. For example, the words involved in a tongue slip both are found within the same syntactic constituent or intonation unit. Most tongue slips involve a symmetrical substitution within a syllable; it means that the first sound of an influencing word substitutes the initial sound of the slipped word. Because of this substitution, it is possible to predict the likely forms taken in a tongue slip. For instance the words “bar”, “har” and the word “hit” can be slipped by “lit” or “wit” can slip the word “car”. Slips of the tongue are a clear example of the neuropsychological processes that happen in the speech.

Next, there is a classification of 20 of the most frequent categories of tongue slips found within a corpus of over 12,000 spontaneous slips in a study carried out by David Crystal (table 1).

Table 1

Classification of 20 of the most frequent categories of tongue slips

Tongue Slips	Classified
1) Initial consonant anticipated - a reading list → leading - it's a real mystery → meal	11) Vowels + r - foolish argument → farlish - fight very hard → fart ... hide
2) Initial consonant perseveration - black boxes → bloxes - gave the boy → goy	12) Single features - spell mother → smell brother - bang the nail → mang the mail
3) Consonant reversals - well made → mell wade - baked a cake → caked a bake	13) Errors within words - relevance → revelance - whisper → whipser
4) Final consonants - with a brush → wish - king, queen → king, quing	14) Stress changes - similarly → similarly
5) Consonant deletion - below the glottis → gottis - tumbled → tubbled	15) Words reversals - a tank of gas → a gas of tank - a job for his wife → a wife for his job

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Tongue Slips	Classified
6) Consonant addition - optimal number → moptimal - kitchen sink → kinchen	16) Telescopic errors - Nixon witness → nitness
7) Consonant movement - pinch hit → pitch hint - bacon and eggs → acon and begs	17) Derivational affixes - often → oftenly - flashing light → flasher
8) Consonant clusters - heater switch → sweeter hitch - damage claim → clamage dame	18) Blends - person/people → perple - draft/breeze → dreeze
9) Consonant clusters divided - stick in the mud → smuck ... tid - fish grotto → frish grotto	19) Word substitution - I don't sleep very well in a single bed → speak very well - chamber music → chamber maid
10) Vowels - fill the pool → fool the pill - Bev and Bill → Biv and Bell	20) Other grammatical errors - It looks like as if ... → I look .... - the day when I was born → the day where ....

Fuente: (Crystal, 1998: 263).

On the other hand, Fromkin (n.d.) says that Freud considers slips of the tongue as the result of repressed thoughts revealed by the errors the speaker makes, but more relevant is what these errors reveal about the structure of languages.

The study of slips of the tongue dates back since the 8th century and the Arab linguist Al-ki-sa-i is supposed to be the first linguist who was interested in them. He thought slips of the tongue could provide information on how language changes, although they have not been useful in knowing how language changes, they have revealed a big deal about our language, how we use it to speak and understand what others say to us.

- Slips of the tongue and the sounds of language. Speech sounds are continuous on a physical level although a word can be composed of separate sounds. Speech errors that can move or substitute, delete or add sounds or phrases show the existence of tongue slips.
- Slips of the tongue and the mental dictionary. Speech errors also tell us a lot about the structure and the organization of the mental dictionary, the storage room where



all the words a speaker knows are kept. See the following examples:

1. He's going up town → he's going down town
2. You have too many irons in the fire → ... in the smoke
3. That's a horse of another color → ... of another race

Notice that the substituted word is replaced by another one related in meaning, it can not be substituted by any word. So, nouns are substituted by nouns, verbs by verbs and prepositions by prepositions; speakers do that unconsciously even though they have not been formally instructed.

The fact that words are substituted for similarity in their sounds and not for their meaning, for example "prosecuted" for "persecuted" suggests that we store words in our mental dictionary in semantic classes (according to their related meanings) and also by their sound (like the spelling sequences in a printed dictionary).

"A speech error (or slip) is an unintentional movement, addition, deletion, blending or substitution of material within or between utterances" (Fromkin, 1973 and Stemberger, 1983 cited in Swells, n.d.). What Fromkin and Stemberger mean is that the speaker says something they did not mean to say. It is the result of unintentional processes; it is not bad grammar, interference from another language or intentional silliness.

Slips can involve single segments (consonants or vowels), parts of words, words, phrases or complete sentences.

### *Phonological Slips: Problems with Sounds*

When speaking, it is possible to make a slip which involves a single sound (this kind of slip includes more than sixty percent). Examples:

1. (an irritated voter)  
Utterance: The Gore pampaign  
Target: The Gore campaign
2. (a friend to another: "That was our plan before we got that \$%\*Ç"!a?;# phone call")  
Utterance: That was the pre phone flan  
Target: That was the pre phone plan

3. (one rattled spouse to another)  
Utterance: Don't you fake your shinger at me!  
Target: Don't you shake your finger at me!

In the first example, /p/ in the second syllable of "campaign" starts the word and replaces the initial consonant. This is called anticipation because it is the result of looking in advance in the utterance getting a sound before you need it. Anticipations are the most common kind of phonological slip.

In the second mistake, the /f/ sound in "phone" replaces the /p/ sound in the following word "plan". This /f/ sound that occurred earlier in the utterance is maintained. This is called phonological preservation. Certain sound hangs around longer than it should have, so it is reused.

The third example is the most impressive. Here, the speaker swapped two sounds creating what is called a spoonerism. The first sounds of "shake" and "finger" are exchanged, taking place a kind of metathesis.

The kinds of mistakes mentioned above are a clear example of how we put together the sounds that compose words. It is like if you had a typewriter machine in your head. Each key in this typewriter machine represents a sound in your language, either a vowel or a consonant sound. Thus, when you want to say a word, you have to hit the keys in the right order. To make this process easier, the keys that you are planning to hit light up and stay lit for a while after you hit them. That "lighting up" is called activation and throughout activation, it is possible to hit a key (one that is included in your speaking plan) by accident. You might hit a lit up key too early (anticipation) or reuse a key you did not have to reuse (preservation) or you might change the order of two keys (metathesis). It is so strange to make a mistake that does not involve a sound in your speaking plan.

### *Morphological Slips: Problems with Meaningful Parts of Words*

Two-meaningful part words are very common in English, for example the words "fireplace", "doorknob" and "cats", all of them have two morphemes. So, when you talk, you can replace one morpheme for another, leave out, add or misplace a morpheme.



### *Lexical Slips: Problems with Whole Words*

Lexical slips take place when you get the wrong word. They happen in two ways: semantically mediated and phonological mediated.

1. Semantically mediated lexical slips.- Mothers are a good example of these slips when they struggle to come up with the right name of one of their children. For instance, "Ron...Laur...Billy! Get over here right now!" The process involved in this kind of slip contradicts in some way what Freud says about tongue slips since they are not the outcome of any subconscious work in the mind. Proper names, related-meaning words and opposite words are often mixed up with one another or are blended together.
2. Phonologically mediated lexical slips.- They occur when the two words, target and utterance have a similar sound but they are not related in meaning.

For example:

Utterance: white Anglo-Saxon prostitute

Target: white Anglo-Saxon protestant.

### *Syntactic Slips: Problems with Whole Sentences*

There are also some mistakes that appear at sentence level, those that might affect its structure, they are unintended utterances. A sentence combination error is maybe the easiest way to detect syntactic slips. In these mistakes, the speaker has two different ways to say the same thing ready at the same time. There is not a decision to avoid one and go ahead with the other, so the result is a combination of both sentences.

For example:

Utterance: Get these little gnomes off my life!

Target one: Get these little gnomes off my back!

Target two: Get these little gnomes out of my life! (Swells, n.d.).

## Studies on Slips of the Tongue

Slips of the tongue have been collected through two techniques in order to be studied. One is the corpus-based and the other experimental. The corpus-based method provides a wider variety of slips produced under normal circumstances but the experimental method has been more useful to test specific hypotheses.

Slips of the tongue have been studied from different perspectives. For example, Freud (1901/1973) studied them from a clinical psychological perspective; Sturtevant (1947), Wells (1951), Celce-Murcia (1973) and others have used a linguistic perspective; Fromkin (1973a) (1980) and Cutler (1982) have studied them from a psycholinguistic perspective.

Slips of the tongue appear since very early stages of the language acquisition. According to Jaeger, (1992, cited in Poulisse, 1999), the first speech error appeared when one of her children was 1;7, still at the one-word stage. Therefore, slips of the tongue seem to be part of speech processing even when the language system has not been developed completely.

Bowerman (1978, cited in Poulisse, 1999) observed that young children from 2 to 5 years old, at the beginning, do not produce any substitution errors involving semantically related words. Then, they go through a stage where they produce a great number of these errors. He thinks this sudden increase in speech errors reveals a lexicon reorganization that results in relations between semantically similar words.

Warren (1986, cited in Poulisse, 1999) was interested in the frequency of slips produced by children and adults, with the belief that all slips have a psychoanalytic cause. She thought that children would make fewer slips since children are less likely to hold back their ideas and impulses. To prove this, she made an analysis of two large child language corpora: 1) a child talking to her mother and 2) a teacher talking to her students. However, as this experiment consisted of a large amount of data to be analyzed, she decided to analyze only the ambiguous cases.

She found out that in fact, children do fewer slips than adults do. In one child's case (1), she produced 3 slips in 108,000 words



and her mother produced 78 in 192,000 words. In the other case (2), eight children produced 16 slips in 88,400 words and the teacher produced 41 in 81,600 words. She also found out that the teacher often substituted children names for each other while children used to call her "mommy" (this is due to associations in the adults' and children's minds). Warren deduced that slips have a psychoanalytic rather than psycholinguistic cause. She gave two explanations on the results of her research: children have a smaller lexicon, so there is less chance for retrieval errors, besides children only make certain kind of slips because they are not cognitively mature to do different kinds of them.

Smith (1990, cited in Poulisse, 1991) developed a new tool to elicit a quick and large amount of slips. It is a tongue twister task involving 10 experimental sentences like "small nails smell silly" and 10 control sentences matched for number of syllables and stress pattern like "small birds look pretty". He made an experiment with 5 five-year-old children and 5 adults. They had to repeat each sentence five times quickly without stopping. He reported that adults made 212 errors while the children made 580, so these results contradict those reported by Warren (1986).

Smith also reported the results of other different analysis. He found that 75-80% of the slips were one-feature errors, 87% were changes in place of articulation, 30% were anticipations, 16-17% were preservations and 10-15% were word exchanges. There were no differences between children and adults.

Several other studies (MacKay, 1970; Aitchison, 1980; Jaeger, 1997) have been made where spontaneous children speech was compared to spontaneous adult speech and the result was quite similar.

Stemberger (1989, cited in Poulisse, 1999) made a comparison between 576 slips produced by his two daughters (ages between 1.0 and 5.11 and 1.0 and 3.4 respectively) and a collection of 6,000 slips produced by adults. He found that children and adult slips were largely the same. Both, adults and children did the same kind of slips: phonological, morphological, syntactic, and so on.

According to the results of his research, Stemberger concluded that language production mechanisms, no matter in children or adults, are already set and operating since the very early langua-

ge acquisition, maybe from the beginning. It seems there is not any alteration through development. However, the great number of similarities between children and adults' slips does not mean that there are no differences in language development, but they are considered as part of a gradual change of the language production mechanism.

Stemberger also found (1) that children produced more phonological errors that are not determined by the context and the phenomenon of phoneme repetition is not present, this is because children show less backward activation from the phonological to the lexical level.

Another important finding made by Stemberger was about (2) the great number of word preservations made by children and he thinks this is the result of a decay of the activation of selected words.

Other difference reported by Stemberger (3) was the proportion of the incomplete anticipations (anticipations or exchanges) lower in children's speech than in adults' speech and the reason of this, according to him, was due to children's inferior monitoring skills. About the same matter, Jaeger (1992) found that incomplete anticipations were related to age (the older the children were, the more anticipations they did). She says that as children grew older, they were able to correct a large amount of their slips but for unknown reasons slips corrections stop again at the age of 5.

A study made by Wijnen (1992) reported interesting findings between children and adults slips explained in terms of differences of practice and automatization. The first one is about the error frequency that is 5 times as high in children as in adults. This is because of the lack of automaticity in children speech. The second difference was that in children's speech a very few lexical substitutions were phonologically motivated. This might be because of the lack of practice for backward activation spreading. The third difference is the great number of sound errors in function words, something that adults hardly did. This can be because two reasons: children have not automatized the phonological encoding of these words or they are still acquiring lexicon, so function words have not become a closed class.



## Slips of the Tongue in Second Language Production

There have been a few studies of slips of the tongue in L2 learners' speech. Slips of the tongue may be useful for models of second language acquisition; they can provide information about lexical storage. A clear example of them is when L2 learners substitute L1 words for the intended L2 words.

According to Bowerman (1978), an increased number of speech errors may reflect what parts of the language system are being developed. On the other hand, in his study, Baker (1990) says that there were only a few differences in the slips produced by near native speakers and native speakers, so they are highly comparable. One difference is that near native speakers produce more morphosyntactic slips than native speakers do. Baker says this is because near native speakers are less used to pre-program in L2. Other difference was that near native speakers tended to substitute more words similar in meaning than in sound, while native speakers replaced lexical items equally in meaning as in sound. He says these slips show that lexicon is organized in dual fashion. Other difference was that native speakers produced more slips before correcting a slip and the reason of these differences is due to pre-programming as well as the greater automatization in native speakers' speech production.

In other study reported by Poulisse and Bongaerts (1994), they found that unintentional language switches in Dutch students of English usually involved single words, these words were function words and were morphologically and phonologically adapted. Those that were morphologically adapted were verbs and students also used some English phonemes when pronouncing some Dutch words. For example, the Dutch word "stuk" (piece) was pronounced as "stuck" in English.

According to the few studies made on L2 slips of the tongue so far, it is concluded that there are a lot of similarities in L1 slips production as in L2 slips production. Although, there are also some differences like the different occurrence of morphosyntactic slips, sound-based lexical substitutions, the number of slips involving phonemes and the number of lexical blends.

## Differences Between L1 and L2 Slips Production

The most important difference between L1 and L2 speakers is that L2 knowledge is not complete. Therefore, L2 speakers have fewer words available than L1 speakers, this is sometimes the reason why L2 speakers do not express their thoughts, but at the same time, they find out alternative ways of expression to solve their lexical problems. Also, L2 speakers' knowledge is often not developed yet, this makes them avoid certain grammatical structures in the L2 or even produce ungrammatical sentences.

A second difference between L1 and L2 speakers is that L2 speech is less fluent than L1 speech. A third characteristic of L2 is that L2 speech keeps traces of L1, mainly when the L2 learners' proficiency is low. Besides, L2 system is incomplete, the L2 speaker has a full L1 system at his disposal. The L1 system is sometimes used accidentally or deliberately in L2 speakers. Deliberate or intentional use of the L1 is called code-switching. Bilinguals can do code-switching because of several reasons to solve lexical problems. For instance, the lack of a particular word in one of the languages ("they fill a linguistic need"), the great disposal of a word in the other language ("the most available word phenomenon"), among others.

About the differences between L1 and L2 speech, it can be said that the two first differences do not represent a big problem since they are due to the lack of automaticity that should be overcome through a step-by-step process that really takes time. In contrast, the third difference seems to be more problematic for monolingual models of speech production because L2 speech is so likely to carry traces of the L1. It is said that bilinguals succeed notoriously when they separate the two languages (Poulisse, 1999).

To sum up, we can conclude that slips of the tongue are the result of a very sophisticated phenomenon that takes place into the brain when dealing with the planning and organization of spoken and heard information.

As we have seen, research done on this subject shows evidence that there are no significant differences between the slips produced by children and the ones produced by adults as well as the slips produced by native speakers and L2 speakers. This does



not mean that there are no any differences at all between L1 and L2 slips production and children and adults slip production; on the contrary, there are some features that can happen either in one or in the other case which are worth to studying for further research on neuropsycholinguistics or psycholinguistics. These features refer mainly to morphological, phonological and syntactic changes which are really interesting for the study of language structure as well as for the language acquisition process.

Another way of explaining the differences mentioned above, related to L2 production, has to do with the lack of automaticity and the little familiarity for pre-programming the L2 in the brain as well as the incomplete lexicon in L2 speakers. This conclusion seems to be logical in terms of the belief that there is only one system to acquire languages but it can be used in a dual way in the case of bilingual individuals.

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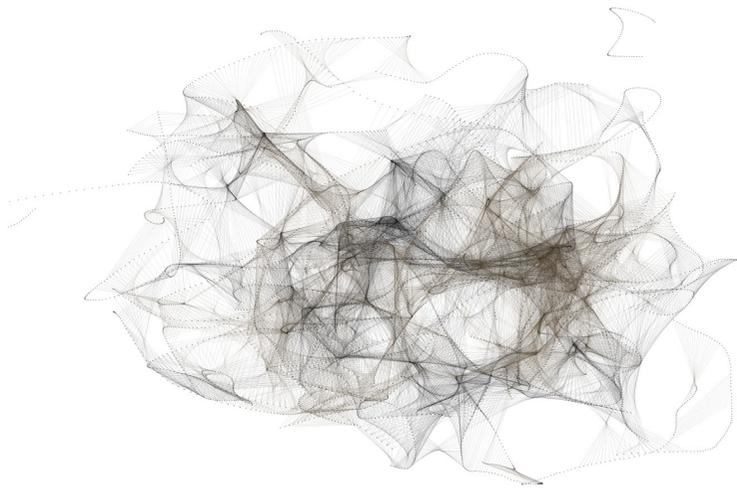
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City: Colima Date: Mon Oct 19 18:14:13 CDT 2015

Temperature: 27

Wentz: 11.27 km/h

Humedad: 74

**Gráfica climática 20. Obra de Heliodoro Santos Sánchez.**